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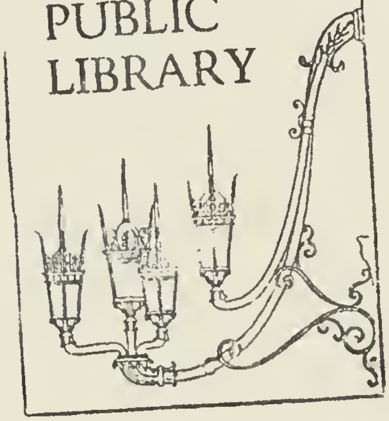

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PROPOSAL

TO PROVIDE

CONSULTING ENGINEERING, SURVEYING AND RESIDENT ENGINEERING SERVICES

FOR

RECONSTRUCTION OF PIER 3

(CHARLESTOWN NAVY YARD)

SUBMITTED TO

BOSTON REDEVELOPMENT AUTHORITY

BY

BRYANT ASSOCIATES, INC
CONSULTING ENGINEERS
BOSTON MA.

In Association With

CHILDS ENGINEERING CORP.
CAROL R. JOHNSON AND ASSOCIATES, INC
LAURENCE L. RUBIN, ARCHITECT
McCARRON, HUFNAGLE & BENT, INC

NOVEMBER, 1988

BRYANT ASSOCIATES, INC.
Consulting Engineers
648 Beacon Street
Boston, Mass. 02215

BRYANT ASSOCIATES, INC.
Consulting Engineers

648 BEACON STREET
P O BOX 38 - KENMORE STATION
BOSTON, MASSACHUSETTS 02215-0038
TELEPHONE (617) 247-1800

November 9, 1988

Boston Redevelopment Authority
City Hall, Room 943
One City Hall Square
Boston, Massachusetts 02201

SUBJECT: Request for Proposal
Charlestown Navy Yard
Services for Design / Resident Engineering

Gentlemen:

Bryant Associates, Inc. is pleased to submit this Proposal for Professional Services for the Reconstruction of Pier 3 in the Charlestown Navy Yard.

This Proposal briefly presents our approach to the work, fee, company profiles, project staffing, key issues along with accompanying SF 254 and Resumes.

We have assembled a team of professional firms predominantly from the Boston area having broad experience in each technical area that must be addressed. Moreover, each of the firms have worked successfully together and we are familiar with the requirements of the Authority and as a result, we will be able to move quickly into substantive work.

Our team includes three firms:

- Childs Engineering Corporation
  Maritime Engineers
- Carol R. Johnson & Associates, Inc. - WBE
  Landscape Architects
  in association with Laurence L. Rubin, Architect
- McCarron, Hufnagle & Bent, Inc.
  Electrical Engineers

We offer the Authority a particular advantage in several important respects:

A. Much of the work will involve Engineering Analysis and Assessment of the existing physical conditions of the Pier and surrounding Project Area.

Bryant Associates recently completed the reconstruction of Northern Avenue from Commonwealth Pier (World Trade Center) to the Marine Industrial Park past Jimmy's Harborside which not only included Engineering assessment and final design but received an Award for Excellence. Both Childs Engineering and Carol R. Johnson have worked on numerous maritime projects individually and together.

B. Bryant Associates, Inc. (BAI), Childs Engineering Corporation (CEC), and Carol R. Johnson & Associates (CRJ&A) have wide experience in the civil and maritime engineering and landscaping aspects for waterfront / pier restoration and are familiar with the Charlestown Navy Yard Project Area.

For example, BAI performed the civil / site engineering and surveys for the BRA's Pier 4 Reconstruction and is presently doing the same at the Navy's Trident Submarine Berths at the Portsmouth Naval Shipyard. CEC and CRJ&A accomplished the renovations to the adjacent Pier 6 for Immobiliare New England. In addition, all Project Team Members have and are currently working together.

C. An experienced Project Manager and Project Leaders who are familiar with the Authority's procedures and design criteria, and a staff who are fully qualified in developing designs for pier reconstructions.

D. An established record of designing to budget and a well-defined and strictly followed design procedure with an emphasis on producing deliverables on schedule.

E. Our Engineering Department is complemented by our Survey Department with five fully equipped survey parties, thereby providing a continuity in service from collecting existing information, recording existing conditions and maintaining responsibility and control of budgets and schedules during the survey and data collection phases of the project, and for the surveys during the construction phase and later for "as-builts".

F. More than 50% of our staff are residents of Boston with 35% of the total staff being minority and women.

G. Our Team is capable of providing full Resident Inspection Services as we recently did for the Massachusetts Port Authority on the Northern Avenue projects and are currently doing for the BRA in the South End Project.

We want very much to work with the Boston Redevelopment Authority's staff on this project to demonstrate our design capabilities as we are our doing for the BRA in construction. We are available at your convenience to personally discuss in greater detail our approach to this project.

Bryant Associates, Inc. is dedicated to serving your needs and providing quality service. We pledge our best effort and look forward to future discussions concerning this project.

Regretfully, we have had to substitute for William H.C. Wong, Inc. since the RFQ phase due to illness. In their place we have solicited the services of McCarron, Hufnagle & Bent, Inc., a well known Electrical Engineering Firm located near South Station with whom we are currently working.

Very truly yours,

BRYANT ASSOCIATES, INC.

Jack D. Bryant, P.E.
President

JDB:fp

PROJECT APPROACH

A. GENERAL

Bryant Associates, Inc. (BAI) with its experienced and talented group of Engineers, Surveyors and Subconsultants has the ability to meet all of the technical requirements as well as satisfying Minority Business Enterprise participation. Bryant Associates will be the single source point of total responsibility and contact for all activities associated with the design and construction of this project. In addition to Project Management and Administration, BAI will progress all areas of design and surveys to the final submission and provide Construction Management and Inspection to the Project's closeout and acceptance.

All the Project Team Members have designed and inspected numerous projects in the City of Boston and are well aware of all the various regulatory agencies, their procedures, and more importantly, their personnel. This familiarity will greatly assist in expediting the work. Some of the agencies and groups we see potentially having to coordinate with on this Project are the Boston Water and Sewer Commission, Boston Public Works Department (P.I.C.) and especially City Street Lighting), the Boston Transportation Group including the Traffic Department, utility companies, the various community groups and abutters / developers. Internally at the BRA we see our primary interrelationship, once the initial Project parameters are set, being with the Engineering Department with input by the Landscaping Division, and the Community Development Department. BAI and its senior members have dealt with all these parties in the past and presently on current projects. We are familiar with the standard review processes / submittals of agencies like the BWSC increasing to the more elaborate submittal of the Public Improvements Commission such as Specific Repair, Widening and Relocation Plans and associates reports.

- Bryant Associates, Inc. (BAI) in addition to Project Management and Administration, will progress all areas of the civil and site engineering and surveying, to the full Contract Documents. BAI will also manage, participate with and coordinate their Subconsultants as stipulated below.

- Childs Engineering Corporation, a well-known waterfront / maritime consultant will provide all the diving inspections, maritime assessment and structural designs.

- Carol R. Johnson & Associates, Inc. (CRJ&A), a prominent Women-owned Cambridge Landscape Architectural Firm, will furnish services in the areas of landscaping and community participation.

The architectural component will be done by Laurence L. Lubkin in association with CRJ&A.

- **McCarron, Hufnagle & Bent, Inc.**, a long-standing consulting firm near South Station will supply all the electrical design for the project.

This combination of Firms familiar with working with each other creates a design and inspection entity that will efficiently and expediently perform all the required services the Authority will need to implement the project.

B. COORDINATION AND CONTROL

The Project will, at al times, be under the unified management and control of Bryant Associates.

The Project Office will be Bryant Associates, Inc. Boston Office at:

648 Beacon Street
Boston, MA 02215
(617) 247-1800
FAX: (617) 247-4921

The Office is managed by the President of the Firm, Mr. Jack D. Bryant, who is a Registered Professional Engineer in Massachusetts.

The Project Manager will be a Principal-in-Charge, Mr. John J. Phillips. He is a Registered Professional Engineer in Massachusetts and has extensive experience on a diversity of projects throughout the area. He also is very familiar with BRA procedures, having worked on numerous BRA design and construction projects including many street reconstruction contracts in the South End and North Station Renewal Areas for almost ten years as a Principal Engineer and Project Manager as his Resume attests.

The Project Manager will supervise his staff of Engineers, Technicians, Surveyors, Drafters, Inspectors and Subconsultants and will coordinate the work with the BRA's Project Manager and Contract Manager, including continuous communication, and will oversee the work of the Subconsultants, monitor schedules, performance, and quality and cost control.

Assisting Mr. Phillips will be Mr. George Monaghan, Jr. Mr. Monaghan also worked on BRA Projects alongside Mr. Phillips in the South End for almost twelve years playing a major role in acquiring and administrating the Grants from EPA and DEQE for all of the funded sewer and drain projects realized in the area.

This combination of Messrs. Phillips and Monaghan gives the BRA a team that will assure the Project's successful completion.

All work will be under the direct supervision of the Principals of BAI who will monitor all design activities for quality control and who will be available for consultation at the convenience of the Boston Redevelopment Authority.

C. AFFIRMATIVE ACTION AND BOSTON RESIDENCY / HIRING

Bryant Associates, being a certified Minority-owned Firm, stands committed to the principals of Affirmative Action as stipulated on the attached Company Policy.

BAI continually asserts its efforts to hire employees and to seek subcontractors and suppliers without discrimination because of race, creed, color, national origin, sex or age and to treat our employees equally with respect to compensation and opportunities for advancement. We adhere to this statement and support the Affirmative Action Policy as stated in the Federal Regulations of September 1976.

Confirmation of this policy is evidenced by the following comparison of our Boston Office's March 21, 1988 census which exceeds the City of Boston Supplemental Minority Participation and Resident Preference Section Work Force Requirements:

Boston Resident	50%	BAI-61%
Minority Employees	25%	BAI-48%
Female Employees	10%	BAI-25%

Bryant Associates also attempts, whenever practicable, to engage subconsultants that are either MBE's or WBE's. For this Project, we intend to use the services of Carol R. Johnson & Associates, a WBE, for Landscaping and Community Participation. These firms formulate an efficient working unit brought about by years of working together on numerous, diverse projects.

In addition, we also try to hire people within the area of the project and have hired survey crew members in the past from a project's neighborhood. An example of this policy would be Byrant's advertising for survey crew members for the Columbia Point (Harbor Point) Housing Rehabilitation Project and eventually hiring survey personnel for the survey duration.

D. PROJECT STAFFING

Mr. Phillips will be overall the Project Manager for both the Design and Construction Management.

We would also like to note that besides Messrs. Phillips; and Monaghan's experience in the South End and North Station areas for the BRA, we intend to utilize the services of Mr. George McCarron, P.E. who has extensive maritime experience as his Resume attests.

The Engineering Department will be supported by the Survey Department headed by Mr. Norman Lipsitz, P.L.S., Chief of Surveys A noteworthy accomplishment of Mr. Herbert Anderson, Jr., Assistant Chief of Surveys, was his being named Surveyor of the Year (1988) by the New England Section of the American Congress of Surveying and Mapping (ACSM).

Childs Engineering Corporation

Pier & Boat Facilities Project Leader - Ronald R. Bourne
Project Engineer - Richard G. Fitzgerald

Carol R. Johnson & Associates, Inc.

Landscape Architect Project Leader - J. William Taylor
Landscape Architect - Donna Repko

McCarron, Hufnagle & Bent, Inc.

Project Leader - Electrical - Charles A. Bent
Electrical Engineer - Stephen Tulena

We feel the character of this Professional Design Team is similar top that of a large corporation. Each of the disciplines involved will be the responsibility of an individual who has available an expert staff with experience working in this discipline. The overall Project Manager will have the various Project Leaders reporting to him and he will act as liaison with the Boston Redevelopment Authority's Project Manager. At any time the overall Project Manager can call upon the individual Project Leaders for expert input to answer any questions that may arise.

Enclosed with this Document of Qualifications are the Affirmative Action Statements of each of the Members of the Team. We would also like to emphasize that Bryant Associates, Inc., a Minority-Owned Business Enterprise with offices in Boston, has been able to assemble a Team which includes Carol R. Johnson & Associates, Inc., a woman-owned business. Bryant Associates, Childs Engineering, Carol R. Johnson, and McCarron, Hufnagle and Bent are all small business companies.

Scope of Work

The site is familiar to members of the Team inasmuch as one member (Childs) has inspected and/or specified repairs for Pier 1, Dry Dock 1, Pier 2, the backlands of Pier 3, Pier 5 and Pier 6 in the Charlestown Navy Yard.

All of these team members are available to work on this Project. As required, additional support is available from other team members not mentioned.

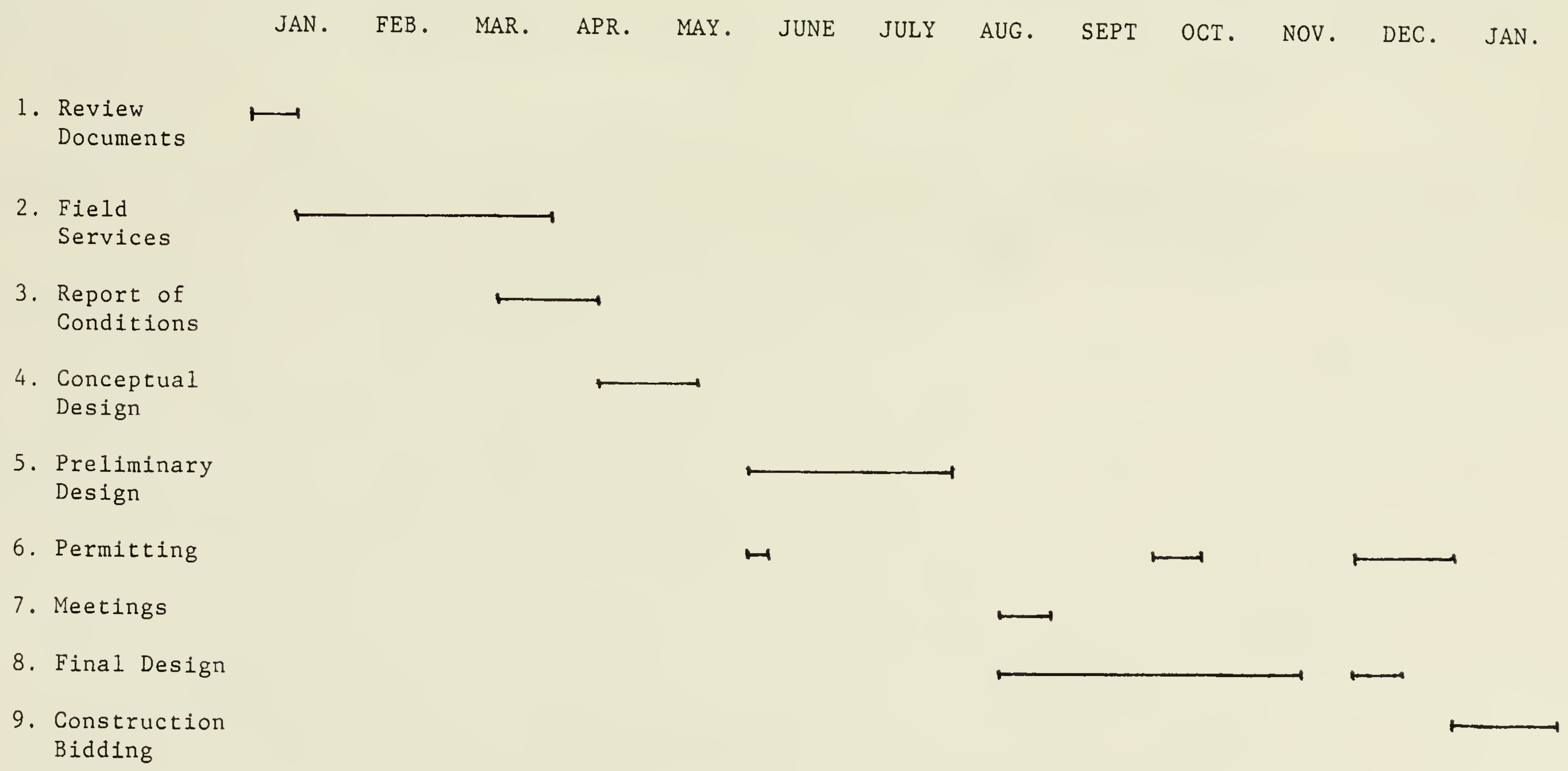
RELATED WATERFRONT PROJECTS

> Wharf Rehabilitation of the John F. Moran Container Terminal in Charlestown (Bryant, Childs and Wong); Boston Fish Pier Renovations (Bryant, Childs); Derby Wharf, Salem, MA (Bryant); Harborwalk, East Boston (Childs, Johnson); Pier 6, Charlestown Navy Yard (Childs, Johnson); Revere Beach Renovations (Johnson, Childs, Bryant). In addition to the various projects where team members have worked together we have included details of some of the projects similar to the Pier 3 project which have been done by various team members.

We cite the work we have done on Pier 6 in the Charlestown Navy Yard for Immobiliare New England as being a similar project to the reconstruction of Pier 3. Childs inspected Pier 6 above and below water, designed the float system for the marina and designed the access ramps from the pier to the floats. Johnson designed the public promenade which included viewing platforms, seating and sun canopies, railings, decking, plantings, night lighting and marine security gates at the ramps. In essence, the renovations to Pier 6 include most of the elements which are requested for the renovation of Pier 3. Not only are the two projects very similar, but they are both located at the Charlestown Navy Yard.

Another similar project was the reconstruction of Hobson's Wharf in Portland, ME. Childs inspected the remains of the old timber piers, specified which piles to save and designed the new pile foundation and superstructure. They prepared the permit application for submission to the City of Portland, the State of Maine and the U.S. Army Corps of Engineers.

BOSTON REDEVELOPMENT AUTHORITY
RECONSTRUCTION OF PIER 3
PROJECT SCHEDULE
1989



FEE PROPOSAL/RATE STRUCTURE

SCOPE OF SERVICES

The Scope of Services as we understand them are enumerated in the "Pier 3 - Project Time and Costs" sheets contained in this proposal. The various headings track the project in chronological sequence as we see it. In order to make clear how each of the components in the RFQ Section III, "Description of Services" fits into our headings, we herewith offer this description.

REVIEW DOCUMENTS (Pp 4)

Before beginning any field work, we would request access to any information regarding the Pier 3 construction and history. Since this pier was part of the U. S. Navy Yard in Charlestown, there must be much information regarding the original construction and later repair contracts for this pier. Our experience in working for the National Park Service on Piers 1 and 2 together with the other structures in the Charlestown Navy Yard was that there was much information about each of the piers.

FIELD SERVICES (Pp 4)

This phase includes the field inspection of the pier structure and surrounding area. The land surveys would be done during this phase. The below and above water inspection of the pier structure would be made to determine what, if any, of the structure could be reused, what parts would need to be reinforced or rebuilt and what parts would be removed to make way for the new pier structure. Soil borings would be taken during this phase. Any of the field services would be performed in accordance with the requirements of the contract. It is the intent of our project group to make all land and boundary line surveys in-house and to perform all structural inspections of the pier above and below water using our own engineer/divers.

The pier inspection would include staking samples of the piles and decking, photographing all areas where structural anomalies are found and photographing typical areas of the pier so that an overall view of the pier structure can be seen. Salinity of the water in the pier area would be determined to aid in selection of new construction material and cathodic protection systems. Electrical potentials at the steel sheet pile bulkhead would be determined. Remaining steel thicknesses of the retaining wall would be determined using ultrasonic testing equipment both above and below water.

REPORT OF CONDITIONS (Pps 1, 3, 4)

A report of the information found and condition of the existing pier would be prepared and submitted to the Authority. This report would include all of the findings of the first two phases of the project. It would give the

Authority an accurate, up-to-date summary of the conditions at Pier 3. This information would be as part of the basis of the design of the Pier 3 project.

CONCEPTUAL DESIGN (Pp 1)
During this phase the ideas for the reconstruction and enlargement of Pier 3 would be developed. Repair, replacement and new construction details would be considered; landscaping ideas together with ideas regarding the amenities to be used would be developed; utility services would be located and potential small vessel floats and access structures would be proposed.

General sketches and details would be developed so that decisions regarding which avenues to pursue could be made by the Authority. Cost estimates of these ideas would be included in order to aid the Authority in deciding which of the proposals would be best chosen for this project.

During this phase the environmental conditions at the site will be reviewed and applicable tidal, wind and wave conditions will be generated (much of this information is in the records of Childs Engineering Corporation who have done other pier work in this area).

PRELIMINARY DESIGN (Pp 1)
Once the Authority has chosen the concepts for the development of Pier 3, preliminary design will be started. The ideas chosen would be developed so that a more detailed look could be made. Consideration of construction and landscape materials would be made, ways of incorporating these materials into the final construction would be decided and overall structural details would be developed.

Outline specifications would be prepared and preliminary cost estimates made. In actuality, all of the work done during this phase of the project is used in the final construction drawings phase. Our procedure for the preliminary design phase of any project is to begin the preparation of the detailed design sheets, specifications and cost estimates. Once the preliminary design phase is approved, we continue developing the same drawings, we expand the specifications and we add more detail to the cost estimates. Naturally, if changes are made during the preliminary design review, the final design documents are revised to reflect these changes.

PERMITTING (Pp 3)
This phase of any project, especially any project on the waterfront, has become a very important and potentially expensive part of the design of the project. It is our understanding that, although permit drawings showing the concept of this project have been prepared, no submittals to any of the cognizant agencies have been made.

Our procedure in any design projects (we work only around the waterfront and so every project requires permitting) is to begin preparation of the permit applications as soon as possible after starting the project. In order to reduce or eliminate the need for making any major changes in these applications, we normally do not submit any application until enough of the project has been defined so that quantities of piles, area of the water being covered, etc. have been determined. The preliminary design phase of the project is a good place to submit applications.

We feel a couple of notes of concern should be expressed at this time. First, elevations of the pier and first floors of any structures would be based on the latest (at the time of design) FEMA guidelines as reflected on their FIRM maps. We are aware that there is discussion on-going regarding minimum elevations of structures along the water's edge. The Massachusetts Department of Environmental Quality Engineering is following these deliberations and may, by the time this project is presented to them for consideration, have adopted newer guidelines for pier deck, pier structure and first floor elevations.

Second, since the Secretary of Environmental Affairs has not yet been presented any of the proposed design documents for this project, we do not know what, if any, documentation in addition to the "notice of intent" he may require. Our fee proposal includes submission of drawings and "notice of intent" application to the Boston Conservation Commission, information copies to the cognizant State and Federal government agencies and attendance at the Boston Conservation Commission hearing which must be held regarding this application. Any further permitting procedures requiring our time would be done on a time and materials basis.

HEARINGS (Pp 5)

During the course of the design portion of the project we foresee the potential for several hearings, both public and before various governmental agencies. The hearing before the Boston Conservation Commission is included in the Permit phase. The hearings in this phase include those before the Authority, itself; citizen and neighborhood groups; other governmental groups. It is our strong feeling that everyone involved in the final decision making process should be kept informed regarding the progress of the projects and about the ideas being incorporated into the project. We have always felt that the final public hearings should be formalities, that all of those involved in the final hearings should have had their concerns met and answered before the hearings.

Although this section is out of sequence regarding final hearings, the time is included in this section even though it will be spent after the Final Design section.

FINAL DESIGN (Pp 2)

During this phase the final engineering and landscape architectural drawings will be produced. Detailed specifications for all materials and structures will be written. A final, detailed cost estimate will be prepared. Design computations will be submitted. The final design statement setting forth all of the pertinent design criteria used by the Consultant in the design will be submitted.

CONSTRUCTION BIDDING (Pp 2)

This phase is considered to be separate from the Final Design phase only because it sometimes occurs some time after the completion of the final design drawings and specifications. During this time we would answer questions of the prospective bidders in a manner and form requested by the Authority, we would attend any pre-bid meetings and site trips, we would evaluate the bids received and recommend to the Authority a Contractor or Contractors as the case may be.

PIER 3 - PROJECT TIME AND COSTS

	CATEGORY	HOURS	RATES	COSTS	EXPENSES	PHASE TOTAL	TIME
REVIEW DOCUMENTS							
Bryant Associates	Project Manager	8.00	72.00	576.00			
	Project Engineer	24.00	57.00	1,368.00			
	Engineer		38.00	0.00			
	Drafter		28.00	0.00			
	Technician		36.00	0.00			
	Clerical		28.00	0.00			
	Project Surveyor		72.00	0.00			
	Surveyor		72.00	0.00			
	Drafter		28.00	0.00			
	EDP		50.00	0.00			
		32.00		1,944.00		1,944.00	32.00
Childs Engineering	Project Manager	8.00	85.00	680.00			
	Project Engineer	8.00	60.00	480.00			
	Engineer	4.00	45.00	180.00			
	Drafter		35.00	0.00			
	Technician	4.00	27.00	108.00			
	Clerical		30.00	0.00			
		24.00		1,448.00	72.40	1,520.40	24.00
C.R.Johnson & Assoc	Project Manager	2.00	75.00	150.00			
	Project L A	8.00	45.00	360.00			
	Landscape Arch	11.00	33.00	363.00			
	Building Arch	2.00	60.00	120.00			
	Clerical		32.00	0.00			
		23.00		993.00	49.65	1,042.65	23.00
McCarron,Hufnagle & Bent, Inc.	Project Engineer	4.00	60.00	240.00			
	Drafter		35.00	0.00			
	Clerical	2.00	30.00	60.00			
		6.00		300.00		300.00	6.00
FIELD SURVEYS							
Bryant Associates	Project Manager		72.00	0.00	9,800.00		
	Project Engineer		57.00	0.00	Note B		
	Engineer		38.00	0.00			
	Drafter		28.00	0.00			
	Technician	40.00	36.00	1,440.00			
	Clerical		28.00	0.00			
	Project Surveyor	20.00	72.00	1,440.00			
	Surveyor (3 men)	64.00	72.00	4,608.00			
	Drafter	50.00	28.00	1,400.00			
	EDP		50.00	0.00			
		174.00		8,888.00	9,800.00	18,688.00	174.00
Childs Engineering	Project Manager	8.00	85.00	680.00	5,280.00		
	Project Engineer	8.00	60.00	480.00	Note A		
	Engineer	4.00	45.00	180.00			
	Drafter		35.00	0.00			
	Technician	8.00	27.00	216.00			
	Clerical		30.00	0.00			
		28.00		1,556.00	5,280.00	6,836.00	28.00
C.R.Johnson & Assoc	Project Manager		75.00	0.00			
	Project L A	4.00	45.00	180.00			

	Landscape Arch		33.00	0.00			
	Building Arch	4.00	60.00	240.00			
	Clerical		32.00	0.00			
		6.00		420.00		420.00	6.00
McCarron,Hufnagle & Bent, Inc.	Project Engineer	4.00	60.00	240.00			
	Drafter		35.00	0.00			
	Clerical		30.00	0.00			
		4.00		240.00		240.00	4.00
REPORT OF CONDITIONS							
Bryant Associates	Project Manager	8.00	72.00	576.00			
	Project Engineer	24.00	57.00	1,368.00			
	Engineer	40.00	38.00	1,520.00			
	Drafter	24.00	28.00	672.00			
	Technician		36.00	0.00			
	Clerical		26.00	0.00			
	Project Surveyor		72.00	0.00			
	Surveyor		72.00	0.00			
	Drafter		28.00	0.00			
	EDP		50.00	0.00			
		96.00		4,136.00		4,136.00	96.00
Childs Engineering	Project Manager	4.00	85.00	340.00			
	Project Engineer	8.00	60.00	480.00			
	Engineer	8.00	45.00	360.00			
	Drafter		35.00	0.00			
	Technician	24.00	27.00	648.00			
	Clerical	8.00	30.00	240.00			
		52.00		2,068.00	103.40	2,171.40	52.00
C.R.Johnson & Assoc	Project Manager		75.00	0.00			
	Project L A		45.00	0.00			
	Landscape Arch		33.00	0.00			
	Building Arch	8.00	60.00	480.00			
	Clerical		32.00	0.00			
		8.00		480.00	24.00	504.00	8.00
McCarron,Hufnagle & Bent, Inc.	Project Engineer	4.00	60.00	240.00			
	Drafter	8.00	35.00	280.00			
	Clerical		30.00	0.00			
		12.00		520.00		520.00	12.00
CONCEPTUAL DESIGN							
Bryant Associates	Project Manager	12.00	72.00	864.00			
	Project Engineer	40.00	57.00	2,280.00			
	Engineer	32.00	38.00	1,216.00			
	Drafter	24.00	28.00	672.00			
	Technician		36.00	0.00			
	Clerical		28.00	0.00			
	Project Surveyor		72.00	0.00			
	Surveyor		72.00	0.00			
	Drafter		28.00	0.00			
	EDP		50.00	0.00			
		108.00		5,032.00		5,032.00	108.00
Childs Engineering	Project Manager	16.00	85.00	1,360.00			

	Project Engineer	32.00	60.00	1,920.00			
	Engineer	48.00	45.00	2,160.00			
	Drafter	8.00	35.00	280.00			
	Technician	56.00	27.00	1,512.00			
	Clerical	16.00	30.00	480.00			
		176.00		7,712.00	385.60	8,097.60	176.00
C.R.Johnson & Assoc	Project Manager	13.00	75.00	975.00			
	Project L A	34.00	45.00	1,530.00			
	Landscape Arch	24.00	33.00	792.00			
	Building Arch	40.00	60.000	2,400.00			
	Clerical	2.00	32.00	64.00			
		113.00		5,761.00	288.05	6,049.05	113.00
McCarron,Hufnagle & Bent, Inc.	Project Engineer	24.00	60.00	1,440.00			
	Drafter	24.00	35.00	840.00			
	Clerical	4.00	30.00	120.00			
		52.00		2,400.00		2,400.00	52.00
PRELIMINARY DESIGN							
Bryant Associates	Project Manager	10.00	72.00	720.00			
	Project Engineer	100.00	57.00	5,700.00			
	Engineer	80.00	38.00	3,040.00			
	Drafter	100.00	28.00	2,800.00			
	Technician		36.00	0.00			
	Clerical		28.00	0.00			
	Project Surveyor		72.00	0.00			
	Surveyor		72.00	0.00			
	Drafter		28.00	0.00			
	EDP		50.00	0.00			
		290.00		12,260.00		12,260.00	290.00
Childs Engineering	Project Manager	16.00	85.00	1,360.00			
	Project Engineer	40.00	60.00	2,400.00			
	Engineer	40.00	45.00	1,800.00			
	Drafter	24.00	35.00	840.00			
	Technician	40.00	27.00	1,080.00			
	Clerical		30.00	0.00			
		160.00		7,480.00	374.00	7,854.00	160.00
C.R.Johnson & Assoc	Project Manager	21.00	75.00	1,575.00			
	Project L A	66.00	45.00	2,970.00			
	Landscape Arch	54.00	33.00	1,782.00			
	Building Arch	120.00	60.00	7,200.00			
	Clerical	4.00	32.00	128.00			
		265.00		13,655.00	682.75	14,337.75	265.00
McCarron,Hufnagle & Bent, Inc.	Project Engineer	30.00	60.00	1,800.00			
	Drafter	30.00	35.00	1,050.00			
	Clerical	4.00	30.00	120.00			
		64.00		2,970.00		2,970.00	64.00
PERMITTING							
Bryant Associates	Project Manager	8.00	72.00	576.00			
	Project Engineer	40.00	57.00	2,280.00			
	Engineer	16.00	38.00	608.00			
	Drafter		28.00	0.00			
	Technician		36.00	0.00			
	Clerical		28.00	0.00			

	Surveyor		72.00	0.00			
	Drafter		28.00	0.00			
	EDP		50.00	0.00			
		64.00		3,464.00		3,464.00	64.00
Childs Engineering	Project Manager	8.00	85.00	680.00			
	Project Engineer	76.00	60.00	4,560.00			
	Engineer	24.00	45.00	1,080.00			
	Drafter	40.00	35.00	1,400.00			
	Technician	40.00	27.00	1,080.00			
	Clerical	8.00	30.00	240.00			
		196.00		9,040.00	452.00	9,492.00	196.00
C.R.Johnson & Assoc	Project Manager	6.00	75.00	450.00			
	Project L A	62.00	45.00	2,790.00			
	Landscape Arch	41.00	33.00	1,353.00			
	Clerical	5.00	32.00	160.00			
		114.00		4,753.00	237.65	4,990.65	114.00
McCarron,Hufnagle & Bent, Inc.	Project Engineer	8.00	60.00	480.00			
	Drafter		35.00	0.00			
	Clerical		30.00	0.00			
		8.00		480.00		480.00	8.00
HEARINGS							
Bryant Associates	Project Manager	16.00	72.00	1,152.00			
	Project Engineer	32.00	57.00	1,824.00			
	Engineer		38.00	0.00			
	Drafter		28.00	0.00			
	Technician		36.00	0.00			
	Clerical		28.00	0.00			
	Project Surveyor		72.00	0.00			
	Surveyor		72.00	0.00			
	Drafter		28.00	0.00			
	EDP		50.00	0.00			
		48.00		2,976.00		2,976.00	48.00
Childs Engineering	Project Manager	8.00	85.00	680.00			
	Project Engineer	8.00	60.00	480.00			
	Engineer		45.00	0.00			
	Drafter		35.00	0.00			
	Technician		27.00	0.00			
	Clerical	4.00	30.00	120.00			
		20.00		1,280.00	64.00	1,344.00	20.00
C.R.Johnson & Assoc	Project Manager	10.00	75.00	750.00			
	Project L A	36.00	45.00	1,620.00			
	Landscape Arch	12.00	33.00	396.00			
	Clerical	0.00	32.00	0.00			
		58.00		2,766.00	138.30	2,904.30	3.00
McCarron,Hufnagle & Bent, Inc.	Project Engineer	16.00	60.00	960.00			
	Drafter		35.00	0.00			
	Clerical		30.00	0.00			
		16.00		960.00		960.00	16.00

Bryant Associates	Project Manager	24.00	72.00	1,728.00			
	Project Engineer	120.00	57.00	6,840.00			
	Engineer	100.00	38.00	3,800.00			
	Drafter	160.00	28.00	4,480.00			
	Technician		36.00	0.00			
	Clerical	24.00	28.00	672.00			
	Project Surveyor		72.00	0.00			
	Surveyor		72.00	0.00			
	Drafter		28.00	0.00			
	EDP		50.00	0.00			
		428.00		17,520.00		17,520.00	428.00
Childs Engineering	Project Manager	40.00	85.00	3,400.00			
	Project Engineer	80.000	60.00	4,800.00			
	Engineer	120.00	45.00	5,400.00			
	Drafter	120.00	35.00	4,200.00			
	Technician	120.00	27.00	3,240.00			
	Clerical	40.00	30.00	1,200.00			
		520.00		22,240.00	1,112.00	23,352.00	0.00
C.R.Johnson & Assoc	Project Manager	86.00	75.00	6,450.00			
	Project L A	337.00	45.00	15,165.00			
	Landscape Arch	166.00	33.00	5,478.00			
	Building Arch	68.000	60.00	4,080.00			
	Clerical	39.00	32.00	1,248.00			
		696.00		32,421.00	1,621.05	34,042.05	696.00
McCarron,Hufnagle & Bent, Inc.	Project Engineer	120.00	60.00	7,200.00			
	Drafter	60.00	35.00	2,100.00			
	Clerical	12.00	30.00	360.00			
		192.00		9,660.00		9,660.00	192.00
CONSTRUCTION BIDDING							
Bryant Associates	Project Manager	6.00	72.00	432.00			
	Project Engineer	16.00	57.00	912.00			
	Engineer	8.00	38.00	304.00			
	Drafter		28.00	0.00			
	Technician		36.00	0.00			
	Clerical		28.00	0.00			
	Project Surveyor		72.00	0.00			
	Surveyor		72.00	0.00			
	Drafter		28.00	0.00			
	EDP		50.00	0.00			
		30.00		1,648.00		1,648.00	30.00
Childs Engineering	Project Manager	16.00	85.00	1,360.00			
	Project Engineer	16.00	60.00	960.00			
	Engineer	16.00	45.00	720.00			
	Drafter		35.00	0.00			
	Technician		27.00	0.00			
	Clerical		30.00	0.00			
		48.00		3,040.00	152.00	3,192.00	48.00
C.R.Johnson & Assoc	Project Manager	2.00	75.00	150.00			
	Project L A	15.00	45.00	675.00			
	Landscape Arch	0.00	33.00	0.00			
	Building Arch	8.00	60.00	480.00			
	Clerical	0.00	32.00	0.00			

PIER 3 - PROJECT TIME AND COSTS

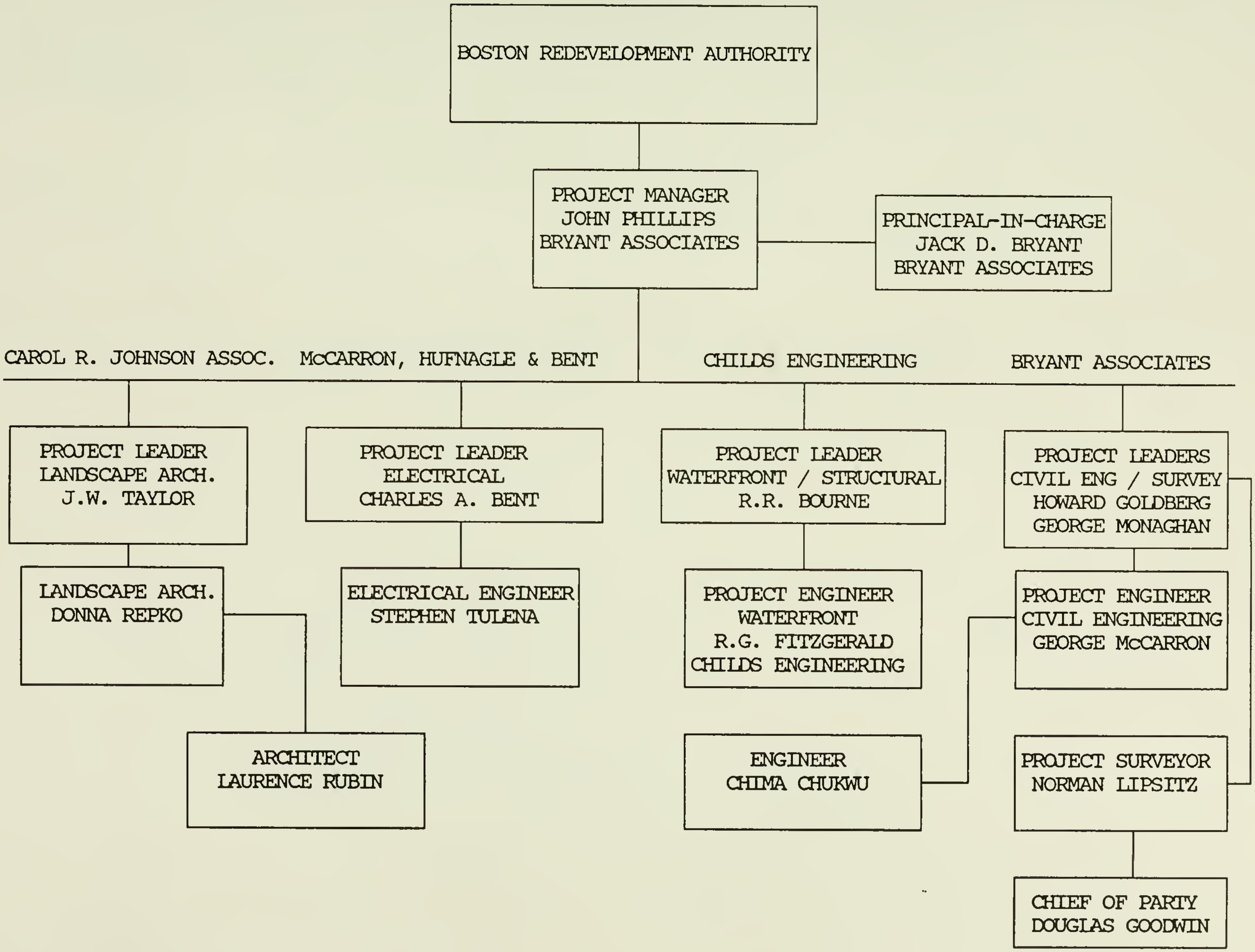
		25.00		1,305.00	65.25	1,370.25	25.00
McCarron,Hufnagle & Bent, Inc.	Project Engineer	8.00	60.00	480.00			
	Drafter		35.00	0.00			
	Clerical		30.00	0.00			
		8.00		480.00		480.00	8.00
NOTE A: Field Survey of Pier 3	Engineer/Diver	48.00	50.00	2,400.00			
	Technician	24.00	30.00	720.00			
	Engineer	32.00	50.00	1,600.00			
	Technician	32.00	30.00	960.00			
	Material Tests			2,000.00			
				5,280.00			
NOTE B: Borings	Enginer	40.00	50.00	2,000.00			
	Technician	40.00	40.00	1,600.00			
	Drafter	40.00	30.00	1,200.00			
	Boring Contractor			5,000.00			
				9,800.00			

TOTALS BY CONSULTANT

BRYANT ASSOCIATES		67,668.00
CHILDS ENGINEERING		63,859.40
C.R.JOHNSON & ASSOC		65,660.70
McCARRON,HUFNAGLE & BENT, INC.		18,010.00
		==========
	TOTAL PROJECT FEE	215,198.10

TEAM ORGANIZATION

PROJECT STAFFING



REFERENCES

REFERENCES

BRYANT ASSOCIATES, INC.

Mr. Gordon Borek (973-5340)
Assistant Director of Engineering
for Design & Planning
Massachusetts Port Authority
State Transportation Building
Boston, MA

Mr. John Sullivan, Jr., Acting Chief Engineer
Boston Water and Sewer Commission (330-9400)
425 Summer Street
Boston, MA

Mr. John R. Dalziel
Deputy Director of Operations & Engineering
Mr. Lawrence Mammoli
Director of Program Engineering
Economic Development & Industrial Corp. of Boston (725-3300)
Operations & Engineering Department
10 Dry Dock Avenue
South Boston, MA 02210

Mr. Stanley Ivan (542-3071)
Chief Engineer
Boston Parks & Recreation Dept.
294 Washington Street
Boston, MA

Mr. Paul McHugh (973-7511)
Highways & Structures Engineer
Mass. Dept. of Public Works
State Transportation Bldg.
Boston, MA

Mr. Charles B. Steward (722-5000)
Asst. Director of Construction for Development
Massachusetts Bay Transportation Authority
Construction Directorate
Ten Park Plaza
Boston, MA

Mr. J. Michael Bennett (401-277-2023)
Acting Supervising Civil Engineer/Road Design
State of Rhode Island
Department of Transportation
Providence, RI

Mr. Frank Grady (454-8821)
City Engineer
City of Lowell
City Hall
Lowell, MA

Mr. Edward McTique (943-9357)
Director
Office of Community Development
112 Main Street
Webster, MA

REFERENCES (continued)

CHILDS ENGINEERING CORPORATION

Mr. Russell Spinney
Maine Department of Transportation
State House, Station 16
Augusta, ME 04333
(207) 289-3318

Mr. Harold Dennis
The Beacon Companies
50 Rowes Wharf
Boston, MA 02110
(617) 330-1400

Mr. Howard Wohltjen
City of Portland
2 Fish Pier
Portland, ME 04101
(207) 773-1613

CAROL R. JOHNSON & ASSOCIATES, INC.

Mr. Joseph Tulimieri, Director
Cambridge Redevelopment Authority
Cambridge, MA
492-6800

Mr. Michael Glavin
Office of Community Development
Chelsea, MA
(617) 889-0702

Mr. Leo Lyden
Metropolitan District Commission
Boston, MA

Mr. Raphael Gottesman
Facilities Manager
Boston Design Center
Boston, MA
(617) 338-5062

Mr. Kim Abbinett
EDIC/Operations & Engineering Department
Boston, MA
(617) 725-3300

Mr. Paul Osborn
Project Engineer
Marine Industrial Park
Boston, MA
(617) 725-3300

BRYANT ASSOCIATES, Inc.

BRYANT ASSOCIATES, INC.
Consulting Engineers

648 BEACON STREET
P O BOX 38 - KENMORE STATION
BOSTON, MASSACHUSETTS 02215-0038
TELEPHONE (617) 247-1800

Bryant Associates, a minority owned professional consulting engineering firm formed in 1976, serves a broad cross section of municipal, industrial, regional, state and federal clients in the survey, planning, design and construction management of environmental facilities; transportation oriented projects including highways, rail, parking facilities and seaport installations; and, civil works involving urban renewal, utilities, demolition and rehabilitation of buildings, streets, drainage and site development.

The Company has grown during this ten-year period to its current staff of seventy-two and the senior members of the firm are all professional engineers with more than 150 years of combined engineering and surveying experience.

Bryant Associates is headquartered in Boston with a staffed regional office in Syracuse, New York. The professional staffs and support personnel at these locations, working in concert with one another, have the demonstrated ability and the capacity, born of long experience, to undertake the wide ranging assignments and to complete the various tasks within required schedules and budgetary constraints.

The principals of the firm have been involved in many facets of engineering in an administrative capacity. Their records emphasize their managerial ability in organizing and completing projects of a major scale within design and construction parameters.

The combined staff of Bryant Associates can bring to an assignment the professional qualities necessary to progress any project to a successful conclusion. Among these are the following:

- Indepth experience in working for private and public agencies.
- Proven results in the preparation of contract documents and specifications.
- Experience in coordinating the efforts of reviewing authorities, public and private agencies, co-designers and the community. The key staff of Bryant Associates are experienced in the organization and implementation of the team concept in the design of complex projects.

Bryant Associates is presently completing various design projects for Massachusetts Department of Public Works, the Massachusetts Port Authority, the Vermont Agency of Transportation, and the New York and Rhode Island Departments of Transportation.

An equal opportunity employer

The Commonwealth of Massachusetts
Executive Office of Economic Affairs
State Office of Minority and Women Business Assistance
100 Cambridge Street — Room 1300
Boston, Massachusetts 02202
(617) 727-8692

MICHAEL S. DUKAKIS
GOVERNOR
JOSEPH D. ALVIANI
SECRETARY

MUKIYA BAKER-GOMEZ
EXECUTIVE DIRECTOR

Dear SOMWBA Certified Business Owner:

Congratulations! You have been certified by the State Office of Minority and Women Business Assistance (SOMWBA) and now you can prove it because your business name appears in the SOMWBA 1987-1988 Directory. This directory is a current listing of over 1000 certified minority-owned and woman-owned businesses operating primarily in Massachusetts as well as some businesses operating outside of the Commonwealth.

We hope that you will use this directory as an opportunity for developing business-to-business relationships with those minority or woman-owned businesses listed in the directory.

The directory is intended to encourage you to utilize the products and services of your fellow business partners and to stimulate other businesses with public procurement managers, local, state and federal agencies in promoting and encouraging the development and utilization of minority and women businesses.

It is important to remember that by allowing other minority and women owned businesses to participate in your business you will be contributing to their growth and stability as well as to the economic growth of the Commonwealth.

Also enclosed is our list of certified minority non-profit organizations. If you have any questions concerning any company listed in the directory, please contact our office at (617) 727-8692.

Once again, congratulations on being a SOMWBA certified minority or woman owned business in good standing and remember to try to give your business to another member of the SOMWBA family.

Sincerely,

Mukiya Baker-Gomez

Mukiya Baker-Gomez
Executive Director

RECEIVED
MAY 16 1988
BRYANT ASSOCIATES, INC.

MBG/mr

Northern Avenue Project
Boston, Massachusetts

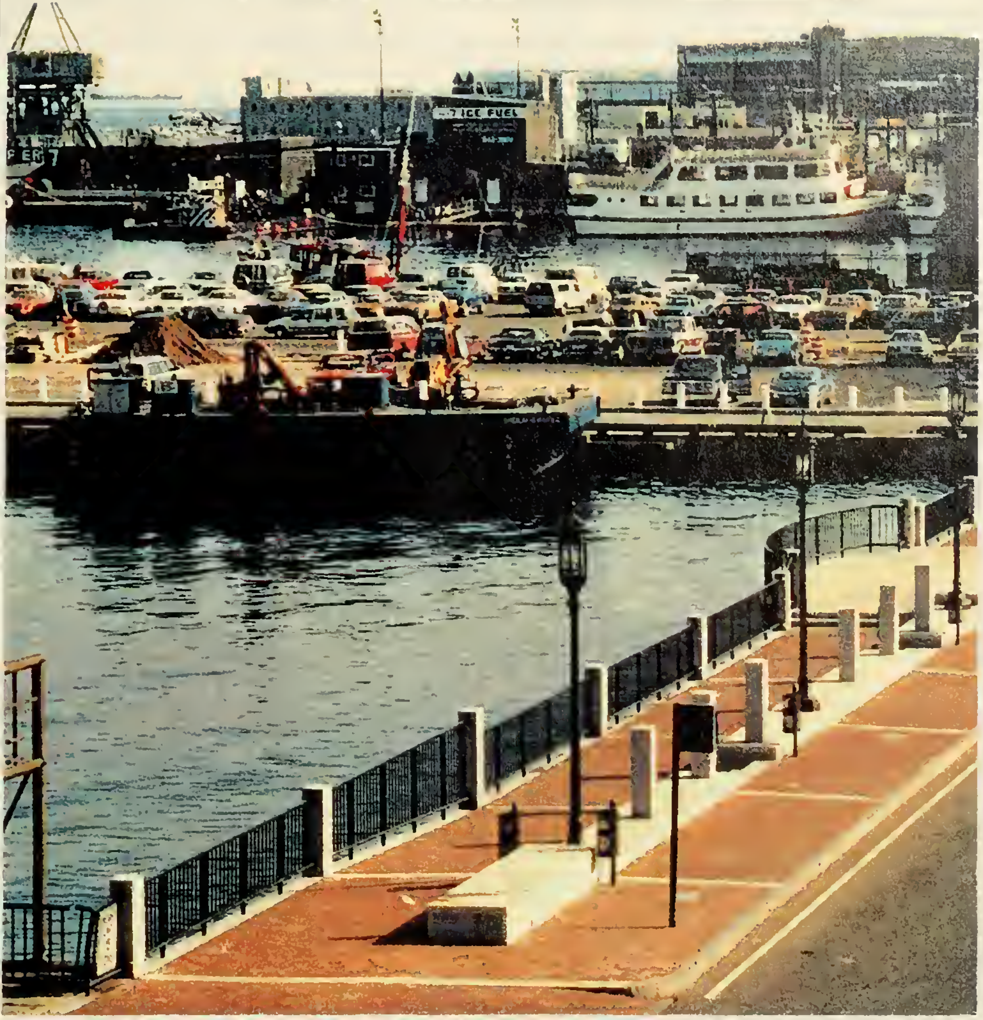
Designer/
Howard Goldberg
Bryant Associates, Inc.
Boston, Massachusetts

Project was part of renovation work at the World Trade Center on Northern Avenue. Pavers were utilized to provide color, texture and human scale to heavy traffic areas and for easy maintenance.

Number of pavers used: 178,000

Size of installation: 50,000 sq. ft.

The judges' comments: "*The use of the three materials (wrought iron, granite, pavers) provide a pleasant blending.*"



Fourth Annual Concrete Paver Design Competition sponsored by the National Concrete Masonry Association

Special Citation

BRYANT ASSOCIATES, INC.
Consulting Engineers

The Judges: A distinguished panel of judges was assembled to review the 128 entries.

Richard D. Olson, AIA
Ellerbe, Inc.
Tampa, Florida
Chairman of the jury

Dorthy Pautz, ASLA
Hellmuth, Obata & Kassabaum, Inc.
Tampa, Florida

Brian Davis, ASLA
Enviro Design
Tampa, Florida

STANDARD FORM (SF)

254

Architect-Engineer and Related Services Questionnaire

1. Firm Name / Business Address:

Bryant Associates, Inc.
648 Beacon Street
P.O. Box 38 - Kenmore Station
Boston, MA 02215-0038

1a. Submittal is for ☐ Parent Company ☐ Branch or Subsidiary Office

2. Year Present Firm Established: 1976

3. Date Prepared: November 1987

4. Specify type of ownership *and* check below, if applicable.

Corporation

☐ A. Small Business
☒ B. Small Disadvantaged Business (minority)
☐ C. Woman-owned Business

5. Name of Parent Company, if any:
N/A

5a. Former Parent Company Name(s), if any, and Year(s) Established:

6. Names of not more than Two Principals to Contact: Title / Telephone

1) Jack D. Bryant, President & Treasurer
2) Howard Goldberg, Vice President

7. Present Offices: City / State / Telephone / No. Personnel Each Office

7a. Total Personnel 72

648 Beacon Street (Home Office) 617-247-1800 48 Persons
P.O. Box 38 - Kenmore Station
Boston, MA 02215-0038

217 South Salina Street (Branch Office) 315-479-7565 24 Persons
Suite 201
Syracuse, NY 13202

8 Personnel by Discipline: *(List each person only once, by primary function.)*

7 Administrative
___ Architects
___ Chemical Engineers
14 Civil Engineers
12 Construction Inspectors
13 Draftsmen
___ Ecologists
___ Economists
___ Electrical Engineers
1 Estimators
___ Geologists
___ Hydrologists
___ Interior Designers
___ Landscape Architects
___ Mechanical Engineers
___ Mining Engineers
___ Oceanographers
___ Planners: Urban/Regional
1 Sanitary Engineers
___ Soils Engineers
1 Specification Writers
1 Structural Engineers
15 Surveyors
1 Transportation Engineers
6 Technicians
72 Total

9. Summary of Professional Services Fees Received: (Insert index number)

Last 5 Years (most recent year first)

	1986	1985	1984	1983	1982
Direct Federal contract work, including overseas	1	1	1	1	1
All other domestic work	6	6	6	5	5
All other foreign work*					

*Firms interested in foreign work, but without such experience, check here: ☐.

Ranges of Professional Services Fees

INDEX	
1.	Less than $100,000
2	$100,000 to $250,000
3.	$250,000 to $500,000
4	$500,000 to $1 million
5	$1 million to $2 million
6	$2 million to $5 million
7	$5 million to $10 million
8	$10 million or greater

Experience Profile Code Numbers for use with questions 10 and 11

001 Acoustics; Noise Abatement
002 Aerial Photogrammetry
003 Agricultural Development; Grain Storage; Farm Mechanization
004 Air Pollution Control
005 Airports; Navaids; Airport Lighting; Aircraft Fueling
006 Airports; Terminals & Hangars; Freight Handling
007 Arctic Facilities
008 Auditoriums & Theatres
009 Automation; Controls; Instrumentation
010 Barracks; Dormitories
* 011 Bridges
012 Cemeteries *(Planning & Relocation)*
013 Chemical Processing & Storage
014 Churches; Chapels
015 Codes; Standards; Ordinances
016 Cold Storage; Refrigeration; Fast Freeze
017 Commercial Buildings *(low rise)*; Shopping Centers
018 Communications Systems; TV; Microwave
019 Computer Facilities; Computer Service
020 Conservation and Resource Management
* 021 Construction Management
022 Corrosion Control; Cathodic Protection; Electrolysis
** 023 Cost Estimating
024 Dams *(Concrete; Arch)*
025 Dams *(Earth; Rock)*; Dikes; Levees
026 Desalinization *(Process & Facilities)*
027 Dining Halls; Clubs; Restaurants
028 Ecological & Archeological Investigations
029 Educational Facilities; Classrooms
030 Electronics
031 Elevators; Escalators; People-Movers
032 Energy Conservation; New Energy Sources
033 Environmental Impact Studies, Assessments or Statements
034 Fallout Shelters; Blast-Resistant Design
035 Field Houses; Gyms; Stadiums
036 Fire Protection
037 Fisheries; Fish Ladders
038 Forestry & Forest Products
039 Garages; Vehicle Maintenance Facilities; Parking Decks
040 Gas Systems *(Propane; Natural, Etc.)*
041 Graphic Design
042 Harbors; Jetties; Piers; Ship Terminal Facilities
043 Heating; Ventilating; Air Conditioning
044 Health Systems Planning
045 Highrise; Air-Rights-Type Buildings
* 046 Highways; Streets; Airfield Paving; Parking Lots
047 Historical Preservation
048 Hospital & Medical Facilities
049 Hotels; Models
050 Housing *(Residential, Multi-Family; Apartments; Condominiums)*
051 Hydraulics & Pneumatics
052 Industrial Buildings; Manufacturing Plants
053 Industrial Processes; Quality Control
054 Industrial Waste Treatment
055 Interior Design; Space Planning
056 Irrigation; Drainage
057 Judicial and Courtroom Facilities
058 Laboratories; Medical Research Facilities
059 Landscape Architecture
060 Libraries; Museums; Galleries
061 Lighting *(Interiors; Display; Theatre, Etc.)*
062 Lighting *(Exteriors; Streets; Memorials; Athletic Fields, Etc.)*
063 Materials Handling Systems; Conveyors; Sorters
064 Metallurgy
065 Microclimatology; Tropical Engineering
066 Military Design Standards
067 Mining & Mineralogy
068 Missile Facilities *(Silos; Fuels; Transport)*
069 Modular Systems Design; Pre-Fabricated Structures or Components
070 Naval Architecture; Off-Shore Platforms
071 Nuclear Facilities; Nuclear Shielding
072 Office Buildings; Industrial Parks
073 Oceanographic Engineering
074 Ordnance; Munitions; Special Weapons
075 Petroleum Exploration; Refining
076 Petroleum and Fuel *(Storage and Distribution)*
077 Pipelines *(Cross-Country--Liquid & Gas)*
078 Planning *(Community, Regional, Areawide and State)*
* 079 Planning *(Site, Installation, and Project)*
080 Plumbing & Piping Design
081 Pneumatic Structures; Air-Support Buildings
082 Postal Facilities
083 Power Generation, Transmission, Distribution
084 Prisons & Correctional Facilities
085 Product, Machine & Equipment Design
086 Radar; Sonar; Radio & Radar Telescopes
* 087 Railroad; Rapid Transit
* 088 Recreation Facilities *(Parks, Marinas, Etc.)*
* 089 Rehabilitation *(Buildings; Structures; Facilities)*
090 Resource Recovery; Recycling
091 Radio Frequency Systems & Shieldings
092 Rivers; Canals; Waterways; Flood Control
093 Safety Engineering; Accident Studies; OSHA Studies
094 Security Systems; Intruder & Smoke Detection
095 Seismic Designs & Studies
* 096 Sewage Collection, Treatment and Disposal
097 Soils & Geologic Studies; Foundations
098 Solar Energy Utilization
099 Solid Wastes; Incineration; Land Fill
100 Special Environments; Clean Rooms, Etc.
101 Structural Design; Special Structures
* 102 Surveying; Platting; Mapping; Flood Plain Studies
103 Swimming Pools
104 Storm Water Handling & Facilities
105 Telephone Systems *(Rural; Mobile; Intercom, Etc.)*
106 Testing & Inspection Services
107 Traffic & Transportation Engineering
108 Towers *(Self-Supporting & Guyed Systems)*
109 Tunnels & Subways
* 110 Urban Renewals; Community Development
111 Utilities *(Gas & Steam)*
112 Value Analysis; Life-Cycle Costing
113 Warehouses & Depots
114 Water Resources; Hydrology; Ground Water
* 115 Water Supply, Treatment and Distribution
116 Wind Tunnels; Research/Testing Facilities Design
117 Zoning; Land Use Studies
201 ____________________
202 ____________________
* 203 Site Engineering
204 ____________________
205 ____________________

** All design projects estimated in-house

10. Profile of Firm's Project Experience, Last 5 Years Note: 023- All design projects estimated in-house.

Profile Code	Number of Projects	Total Gross Fees (in thousands)	Profile Code	Number of Projects	Total Gross Fees (in thousands)	Profile Code	Number of Projects	Total Gross Fees (in thousands)
1) 011	2	255	11)			21)		
2) 021	22	3,335	12)			22)		
3)			13) 079	3	19	23)		
4)			14) 087	10	594	24)		
5)			15)			25) 104	4	67
6) 046	28	2,890	16) 088	5	206	26) 110	4	25
7)			17) 096	31	400	27) 115	3	30
8)			18)			28) 203	27	790
9)			19)			29)		
10)			20) 102	142	6,117	30)		

11. Project Examples, Last 5 Years

Profile Code	"P", "C", "JV", or "IE"	Project Name and Location	Owner Name and Address	Cost of Work (in thousands)	Completion Date (Actual or Estimated)
011	C	1 Raymond Baldwin Bridge (I-95) Proposed Conn Dot Project 105-130 Old Saybrook-Old Lyme, Connecticut	Connecticut Dept. of Transportation 24 Wolcott Hill Road Wethersfield, Connecticut	30,000	1986
021	P	2 Northern Ave/Comm. Flats S.S. Interceptor Summer Street S.S. Pumping Station South Boston, Massachusetts	Massachusetts Port Authority Ten Park Plaza Boston, Massachusetts	4,450	1986
021	P	3 Expansion of Toll Facilities, Inter. No. 34 New York State Thruway Canastota, New York	New York State Thruway Authority 200 Southern Boulevard Albany, New York	200	1986
021	C	4 Rehab. of Riverside Drive Viaduct 125th - 135th Streets New York City, New York	New York State Dept. of Trans. 1220 Washington Avenue Albany, New York	37,000	1986
021	C	5 East Berkeley St. Interceptor Separation w/ Street Reconstruction- Contract SD-3 South End, Boston, Massachusetts	Boston Water & Sewer Commission 10 Post Office Square Boston, Massachusetts	5,000	1987
046	P	6 Southern Tier Expressway, Route 17 Preliminary Design Corning, New York	New York State Dept. of Trans 1220 Washington Avenue Albany, New York	85,000	1988
046	P	7 Reconstruction of Pawtucket Boulevard 1.5±miles - Urban Highway Lowell, Massachusetts	City of Lowell John F. Kennedy Civic Center Lowell, Massachusetts	3,600	1988

046	C	8 Interstate 291 - 2±mi.-Highway & Bridge, new South Windsor, Connecticut	Connecticut Dept. of Transportation 24 Wolcott Hill Road Wethersfield, Connecticut	18,000	1988
046	P	9 Rte 2 Widening & Safety Improvements 2± miles - Highway Reconstruction Lexington/Concord, Massachusetts	Massachusetts Dept. of Public Works Ten Park Plaza Boston, Massachusetts	4,400	1988
046	P	10 Northern Ave. Reconst.-Phase I&II/III 1.5± mi.-Urban waterfront w/ const. inspection South Boston, Massachusetts	Massachusetts Port Authority Ten Park Plaza Boston, Massachusetts	4,800	1986
046	P	11 Rockville-Alton Rd. Reconstruction 3.2± miles-Rural Highway Hopkinton, Rhode Island	Rhode Island Dept. of Transp. State Office Building Providence, Rhode Island	2,500	1988
046	P	12 Route 2 Reconstruction 4.5± miles of highway reconstruction Cabot/Danville, Vermont	Vermont Agency of Transp. State Office Building Montpelier, Vermont	5,200	1986
079	P	13 Boston Fish Pier Facility Study Northern Avenue South Boston, Massachusetts	Massachusetts Port Authority Ten Park Plaza Boston, MA	(Fee) 10	1983
087	C	14 Design Section N760 Rapid Transit Reconstruction Atlanta, Georgia	Metropolitan Atlanta Rapid Transit Authority Peachtree Centre Atlanta, Georgia	25,000	1986
087	C	15 Systemwide Track Improvement Program Track, Signalization etc. @ various areas Boston Metropolitan Area, MA	Mass. Bay Transportation Authority Ten Park Plaza Boston, Massachusetts	40,000	1985
088	P	16 Franklin Field Playground/Park Athletic Fields, children's playlots, etc. Boston, Massachusetts	Boston Park & Recreation Dept. 294 Washington Street Boston, Massachusetts	200	1983
096	C	17 Milford Sewer System Rehabilitation T.V. Inspection, cleaning & repair Milford, MA	Town of Milford Milford, Massachusetts	50	1982
096	C	18 Wastewater Treatment Plant Operations and Maintenance Manual Windsor Locks, Connecticut	Town of Windsor Locks Windsor Locks, Connecticut	(Fee) 44	1983
096	C	19 Deer Island Treatment Facilities Plan Winthrop, Massachusetts	Mass. Water Resources Authority Charlestown Navy Yard Boston, Massachusetts	31 (Fee)	1987

102	C	20 I-84/I-91 Interchange Topographic & Bridge Surveys Hartford, Connecticut	Connecticut Dept. of Trans. 24 Wolcott Hill Road Wethersfield, Connecticut	(Fee) 330	1984
102	C	21 Central Artery-North Area Topographic & R.O.W. Charlestown, Massachusetts	Mass. Dept. of Public Works Ten Park Plaza Boston, Massachusetts	(Fee) 370	1987
102	C	22 Old Colony Railroad Rehabilitation Topographic, Hydrographic, Takings, R.O.W., etc. Various Commuter RR branches (4)	Mass. Bay Transportation Authority Ten Park Plaza Boston, Massachusetts	100,000 (Fee) 800	1990
102	C	23 Bowdoin/Charles Conn.-Red Line Topographic, Utilities & Tunnel & R.O.W. Boston, Massachusetts	Mass. Bay Transportation Authority Ten Park Plaza Boston, Massachusetts	(Fee) 189	1987
102	P	24 Annual Survey Services per Work Order Location, Invert, Easements, R.O.W. Eastern Massachusetts	Mass. Water Resources Authority Charlestown Navy Yard Boston, Massachusetts	50 (Fee)	1987
104	C	25 Moran Containerport Expansion Drainage and Utilities Chelsea, Massachusetts	Massachusetts Port Authority Ten Park Plaza Boston, Massachusetts	8,800	1987
110	P	26 One Franklin Place Downtown High Rise Development Boston, Massachusetts	Lincoln Property Company 265 Franklin Street Boston, Massachusetts	75,000	1985
115	P	27 Slater Street Water Main 4500± L.F. of up to 12" water mains Webster, Massachusetts	Town of Webster Office of Community Development, P.O. Box #207 Webster, MA	190	1985
203	P	28 Hingham Condominium Development 106 Lot Subdivision-All Site Work Hingham, Massachusetts	Patrick F. Walsh Co. 110 West Squantum Street No. Quincy, Massachusetts	30,000	1987
203	C	29 JFK/Univ. of Mass. Red Line Station Survey, Grading & drainage, water & sewer Boston, Massachusetts	Mass. Bay Transportation Authority Ten Park Plaza Boston, Massachusetts	16,000	1986
203	C	30 Bristol County Jail/House of Corrections- Grading, drainage, water & sewer Dartmouth, Massachusetts	Mass. Dir. of Capital Planning & Operations One Ashburton Place Boston, Massachusetts	80 (Fee)	1987

12 The foregoing is a statement of facts

Signature: Jack D. Bryant

Typed Name and Title: Jack D. Bryant, President

Date: 11/2/87

☆ U.S. GOVERNMENT PRINTING OFFICE : 1984 O - 421-526 (22)

JOHN J. PHILLIPS

Vice President/Project Manager

EDUCATION/REGISTRATION

B.S. - Merrimack College; Civil Engineering
M.B.A. - Western New England College

Registered Professional Engineer in Massachusetts and California

MEMBER: American Society of Civil Engineers
Society of American Military Engineers

EXPERIENCE

Mr. Phillips is a Principal-In-Charge and has extensive and varied experience in highways, urban design, sewer/drain separations, utility relocations, parks and construction management.

Prior to joining Bryant Associates, Mr. Phillips was a Project Manager with a variety of projects at the Massachusetts Port Authority. Such projects included the Logan Airport Satellite Parking Program to construct parking lots exterior to Boston to alleviate the parking and access problems at Logan Airport; the Asbestos Abatement Program for emergency and planned asbestos removal at all Massport facilities; the Tobin Bridge Decking and Painting Study; and the Tobin Bridge Emergency Steel Repairs with coordinated full traffic closures. His primary area of concern was implementing improvement projects for the redevelopment of the Northern Ave./Comm. Flats area of South Boston. These projects consisted of the painting, lighting and misc. repairs to the Viaduct leading into the World Trade Center; the Northern Ave./Comm. Flats Sanitary Sewer; the Summer Street Pumping Station; Northern Avenue Reconstruction - Phase I and Phase II/III; Northern Ave. Parking Lot; the renovation of Comm. Pier into the WTCB; Comm. Pier fender/apron deck rehabilitation for tenant berths with ticket office renovations; re-roofing Bldg. 4 (Jimmy's Harborside) and Bldg 5 (Jimbo's); the Boston Fish Pier Roadway & Parking Improvements and the working apron reconstruction study; and miscellaneous reviews/studies involving operations and development of the area e.g. expansion of the WTCB, DecWorld/QE-II improvements etc.

Previously he was a consulting Project Manager responsible for all aspects of design and construction management for the Boston Redevelopment Authority's North Station Urban Renewal Area which included the preliminary design for $6.8 million of phased roadway reconstruction under Urban Systems and site preparation for the GSA Federal Building with such contracts as the Madison Hotel Demolition, the Interim Detour, and extensive utility relocations.

Concurrently, he was assisting in the design and construction management of contracts within the Boston Redevelopment Authority's South End Project Area, a 600-acre urban renewal project. These included numerous street and park reconstruction contracts and ten constructed, twelve designed EPA-funded sewer separation contracts, and a 500 cfs combined sewer overflow treatment facility for the pollution abatement of Boston Harbor. Simultaneously he was the Chief Resident Engineer for the Boston Water and Sewer Commission's Contract SD-3, a major sewer separation/interceptor construction contract. He also was the project engineer for Pipeline Rehabilitation Contract No. 1 for the City of Fall River, Massachusetts. This consisted of the rehabilitation or replacement of approximately 39,000 linear feet of existing sewer.

A sampling of other projects he has worked on are: Massachusetts Routes 1-190, 25 and 140; Connecticut Routes 1-72 and 1-84; Milford and Bristol, Connecticut Urban Renewal Area; Stratford, Connecticut Treatment Plant; Rocky Hill, North Branford and Naugatuck, Connecticut, Subdivisions; Rocky Hill Drainage Study; Turners Falls and New Bedford, Massachusetts Airports.

From college, Mr. Phillips was an Assistant Highway Engineer for the State of California, Division of Highways in Los Angeles.

GEORGE F. MONAGHAN, JR.

Project Manager / Associate

EDUCATION

Assoc. - Wentworth Institute; Architectural Engineering

B.S. - Roger Williams College; Construction Engineering

EXPERIENCE:

Mr. Monaghan recently joined the firm of Bryant Associates, Inc. after sixteen years of continuous service with a major New England consulting engineering firm, as a Principal Engineer in their RI and MA offices. He was responsible for urban renewal projects; highway, secondary roadway, highway safety improvements, wrong-way signing, railroad grade crossing elimination and multi-phased urban redevelopment projects; water main replacement and water main leak detection programs; a high service water system demand and distribution study; 27 inch aerial sewer rehabilitation study; major utility coordination efforts for Subway projects; EPA Construction Grant Sewer Separation projects; and Inflow/Infiltration Surveys.

Mr. Monaghan was responsible for the preparation of Contract Documents for the Crowell Street Water Main Replacement Contract and the City-wide Water Main Leak Detection Program for the Pawtucket Water Supply Board. On the RIDOT Memorial Boulevard Extension (MBE)/Providence River Relocation Project, and the adjacent Capital Center Project, Mr. Monaghan's responsibilities included the coordination, layout, design and phasing of all public and private utility system relocation and improvement efforts associated with the relocation of the Woonasquatucket and Moshassuck Rivers, demolition of existing bridges, and construction of new roadway and utility/pedestrian bridges, river walls, and two and four-lane urban roadway systems. He also prepared US Army COE, RI Coastal Resources Management Council, and US Coast Guard Permit Applications for the MBE/River Relocation Project.

On the Capital Center Project, a multi-phased urban redevelopment project in Providence, Mr. Monaghan assisted with the later phases of design and oversaw the preparation of final bid documents for Capital Center Contract 3, which included new, relocated and temporary bypass road construction; bridge and wall construction; and building, bridge and railroad embankment demolition. Mr. Monaghan's responsibilities included coordination with the various private utility companies, public agencies, private developers with on-going construction adjacent to the project, and the RI Board of Health and Department of Environmental Management.

Concurrently, Mr. Monaghan also developed and estimated alternate rehabilitation and flow-bypass proposals for restoration of an existing 27 inch steel aerial interceptor sewer for East Providence.

In Massachusetts Mr. Monaghan was associated exclusively with Boston projects primarily in the 600 acre South End Urban Renewal Area acting as Assistant Project Manager. His assignments included the design and preparation of plans, specifications and estimates for infrastructure repair and replacement contracts such as street and park reconstructions and especially sewer separation contracts, which work developed into the initial 1977 City of Boston South End EPA Grant Program for the construction of eleven sewer separation contracts totaling $19,000,000.

As part of the South End EPA Grant Program, Mr. Monaghan assisted in the preparation of the initial 1975 EPA Facilities Plan for the construction of the above referenced eleven sewer separation contracts, and prepared the 1977 South End Facilities Plan Supplement for the balance of the remaining thirteen contracts of the South End Improvements Program. During this period he supervised the design, inspection and final report preparation of two sewer inspection contracts. He also prepared five BRA/Boston Water and Sewer Commission EPA Grant Applications, for the design replacement of the Boston Main Interceptor; for design / construction of the South End Pollution Abatement and Flood Control Facility; for construction of the referenced eleven sewer separation contracts; and for design of the remaining thirteen Sewer Separation Contracts SD-6 through SD-18.

During the design phase of South End Contracts SD-6 through SD-18, Mr. Monaghan assisted with interagency coordination and preparation of the overall design criteria, final design summaries, and plans and specifications for the thirteen sewer separation contracts. He himself was responsible for the overall layout and design of three of the thirteen contracts which included relocation of water mains, and traffic signal and street lighting systems; and for the hydraulic design of ten of the thirteen contracts.

At the same time, Mr. Monaghan also prepared recommendations for utility coordination and relocations required for the design of MBTA Vent Shaft Projects R-11, R-16 and R-17 and reviewed public and private utility proposals for the South End Area for correlation with existing and proposed BRA South End Improvements.

Earlier in his career, Mr. Monaghan also assisted in the preparation and data collection for Inflow/Infiltration Surveys for Taunton, MA and Westerly, RI and with the design, estimating and drafting supervision of the following projects:

- RIDOT Interstate Highway Safety Improvements - Phase 2 Wrong-Way Signing and Alignment Modifications;
- RIDOT I-95 Interstate Highway Safety Improvements, Connecticut State Line to the Massachusetts State Line;
- RIDOT I-195 Interstate Highway Safety Improvements, I-95 to the Massachusetts State Line;
- RIDOT Railroad Grade Crossing Elimination, Warwick, Rhode Island; and
- Hanscom Field Roadway Modifications, Bedford, Massachusetts

HOWARD GOLDBERG

Vice President/Project Manager

EDUCATION/REGISTRATION

B.S. - Northeastern University; Civil Engineering
M.S. - Northeastern University; Civil Engineering
Value Engineering Workshop - 40 hrs. recognized
EPA/GSA/FHWA/Society of American Value Engineering

Registered Professional Engineer in Massachusetts, Connecticut, New York, New Hampshire, Rhode Island, Florida and Maine

MEMBER: New England Water Pollution Control Association

EXPERIENCE

Mr. Goldberg is a Principal-In-Charge and has extensive and varied experience in highways, subways, railroads, streets, utility relocations, traffic environmental studies, and all types of surveys.

He is completing major highway design projects in Virginia, Connecticut and Rhode Island and is currently managing the survey, site and civil engineering designs for the upgrading of Massport's Moran Cargo Terminal, a major containerport. The same was provided for Massport's Conley Terminal several years earlier. He has also been Project Manager for several other Massport projects including the design and construction administration of the Reconstruction of Northern Avenue Phases I and II/III including emergency repairs and condition survey to the existing Quay Wall; the 1600 car parking lot on Commonwealth Flats; the Northern Avenue Sanitary Sewer and the Summer Street Pump Station; all in support of waterfront and marine industry development, such as the Fish Pier, World Trade Center etc. In previous designs for Massport, he was Project Engineer for portions of the Logan Airport Maintenance Road, site development at Bird Island Flats, and others.

In addition, Mr. Goldberg has been Project Engineer for new sections of subway projects in Atlanta and Washington, D.C.

His experience includes services for municipalities such as Webster, Boston and Lowell. These projects included simple repaving projects, major sewer lines, water and gas line relocations and construction administration of these projects.

In addiiton, Mr. Goldberg has participated in a variety of TOPICS studies. His involvement encompasses the broad range from the production of the plans, specifications and estimates to client contact. In addition, he participated in the design of three major highway feasibility studies.

GEORGE L. McCARRON

Senior Engineer

EDUCATION/REGISTRATION

B.S.C.E. - Northeastern University

Registered Professional Engineer in Massachusetts

EXPERIENCE

Mr. McCarron has an extensive background in site development, large and small, including industrial parks, subdivisions, urban high rises, parks, military bases and waterfront facilities such as shipyards, cargo and ferry terminals. His responsibilities include all types of civil work such as sanitary, drainage, and water (fire and domestic) designs, utility arrangements, roadway and parcel layouts, profiling, grading and permitting. He is presently laying out a new 94 acre subdivision in Hingham, MA; a 23 acre condominium development in Braintree, MA; doing the civil engineering for 3 multi-story buildings in downtown Boston; and the civil/site work for a new B.O.Q. Bldg. at the Naval base in Newport, RI. He has also completed highway and interchange layouts in Richmond, VA and Rt 7, New Canaan, CT to name a few projects.

Prior to joining Bryant Associates, Mr. McCarron was the Senior Facilities Engineer for the General Dynamics Corp. at the Quincy Shipyard supervising major capital improvements projects like drydock and heavy crane repairs. He was also responsible for waterfront and railroad projects such as a utility design and layout for a new 800' pier in Charlestown, S.C.; a commuter boat pier in Hull, MA; a ferry terminal in Hyannis, MA; and the First St. Railroad in Boston.

From 1972 to 1979 Mr. McCarron was involved in the design of the Trident submarine drydock facility in Bangor, Washington. His primary function was the layout and design arrangement of utilities to service this particular class of ships. During this time he also was involved with the Portsmouth Naval Shipyard in the reconstruction of crane rail systems at Berths 11, 12 & 13 and the Charleston, S.C. Naval Shipyard reconstruction of a pumphouse for Drydock #1 and the relocation of existing utilities for the modernization of Pier "F".

CHIMA CHUKWU

Engineer

EDUCATION/REGISTRATION

B.S. Civil Engineering - Northeastern University
M.S. Engineering Management - Northeastern University
Dr. Martin Luther King, Jr., Scholar - Northeastern University

MEMBER: American Society of Civil Engineers
Massachusetts Association of Land Surveyors and Civil Engineers

EXPERIENCE

Since joining Bryant Associates Mr. Chukwu's responsibilities have varied from conceptual roadway layouts and estimates to the final grading and drainage on a number of site development projects. For example, Mr. Chukwu has performed the grading and preliminary and final storm drainage design for the Bristol County Jail; and the preliminary design of Twin R.C. Box Culverts for the enclosure of Davenport Creek in Dorchester, Mass. He was also the Project Engineer responsible for the site grading and septic system design for the Tea Rock Garden Housing Project in Marshfield, Mass. In addition he assisted on the Impact Study of the Central Artery Depression/Third Harbor Tunnel on Boston's Marine Industrial Park, and on the site and utilities design of the new student dormitories of University of Lowell, Mass.

Currently, he is the assigned Project Engineer for the Civil and Site Engineering design for the proposed $55M Outgoing Mail Facility in North Reading, MA, and the $50M General Mail Facility in Worcester, MA, for the United States Post Office.

Prior to joining Bryant Associates, Mr. Chukwu worked with the City of Fairbanks, Alaska where he was in charge of street reconstruction and site development projects. Concurrently he field reviewed utility improvements and performed surveys when needed.

Mr. Chukwu also worked for the Metropolitan District Commisssion, Needham DPW, and a consulting firm. His primary focus was urban street reconstruction including the associated construction of sewers and drains and utility relocations. He followed through on the preparation of plans, specifications and estimates by performing the construction management of the improvements. Where needed Mr. Chukwu designed structures for storm water discharge, retention and recharge, and septic systems. He also provided construction surveys for site and building projects.

JON-ERIC WHITE

Engineer

EDUCATION/REGISTRATION

B.S. Civil Engineering and Management
University of Massachusetts / Amherst

Engineer-in-Training in Massachusetts

MEMBER

American Society of Civil Engineers

EXPERIENCE

Mr. White is currently working on the preliminary design for the Massachusetts Water Authority's Early Site Preparation Contract for Deer Island and the Rehabilitation of Berths 11, 12 and 13 at the Portsmouth Naval Ship Yard which includes demolition, site development, roadways, parking, earthwork, pumping stations and utilities. His responsibilities in the past have varied from conceptual roadway layouts and estimates to the final layout and grading on roadway projects.

Prior to joining Bryant Associates, Mr. White performed the preliminary and final roadway design of the access roads at both Deer and Nut Islands for the MWRA Marine Transportation Facilities. He assisted in the final grading design of both the I-93 / Route 16 Interchange Reconstruction and the Reconstruction of Manning Road in Burlington; and in the final profile design and the associated drain lines of various roadways in Boston's South End for the BRA.

He also accomplished the Right-of-Way Layout Metes and Bounds Description for the I-93 / Route 16 Reconstruction and supervised the permit layouts for DEQE Division of Waterways Chapter 91 and Army Corps of Engineers Title 404 Applications for the MWRA On-Island / On-Land Marine Transportation Facilities. Other miscellaneous duties include surveying, boring inspection, pier inspection, construction / quantity takeoffs, and estimates for bridges and roadways.

NORMAN I. LIPSITZ

Associate/Chief of Surveys

EDUCATION/REGISTRATION

A. E. Wentworth Institute

Registered Land Surveyor in the States of Massachusetts and Rhode Island and Connecticut

MEMBER: American Congress on Surveying and Mapping

EXPERIENCE

Mr. Lipsitz's professional career spans more than 18 years of experience in all phases of land surveying.

At Bryant Associates, Inc., Mr. Lipsitz is the Chief Surveyor responsible for all field survey personnel, deed research, calculations, preparation of right-of-way drawings, property plans and related surveying requirements associated with various projects undertaken by the firm. Recent projects under his direction include the surveys for the North Section of the Central Artery for the Massachusetts Department of Public Works, the Columbia Point Housing Improvements for the development team, the North Station Improvement Project for the Massachusetts Bay Transportation Authority and several private development projects.

Mr. Lipsitz supervises the activities of Bryant Associates five (5) survey parties, including scheduling, coordinating the reduction of field notes and plotting of the field information.

Prior to joining Bryant Associates, Inc., Mr. Lipsitz was responsible for the surveying for the Southwest Corridor Project (Orange Line Relocation) for the Massachusetts Bay Transportation Authority. This involved surveying of existing conditions, surveying of property lines for the proposed takings and preparation of all right-of-way drawings required.

HERBERT D. ANDERSON, JR.

Assistant Chief of Surveys

EDUCATION/REGISTRATION

Various courses on Surveying at Franklin and Wentworth Institutes, Palm Beach Junior College, Massachusetts School of Survey and North Shore Community College

Northeastern University - Center for Continuing Education,
Building Technology Program
Faculty Member Teaching Survey I & II

Certificate of Continuing Education and Professional Development - New England Section ACSM

Surveyor of the Year (1988) - New England Section ACSM

Licensed Construction Supervisor - Massachusetts

MEMBER: American Congress on Surveying and Mapping (ACSM)
New England Section - ACSM
National Society of Professional Surveyors
Eastern Massachusetts Association of Land Surveyors and Civil Engineers

EXPERIENCE

Mr. Anderson has been with Bryant Associates since 1985 working on diverse surveying projects. Besides being responsible for selected field surveys, Mr. Anderson primarily assists in the research, office calculations, and project assignments in support of five full-time survey parties.

He has over 29 years of experience in the surveying field in the office and in the field as a Party Chief working with engineering and surveying firms in Massachusetts and Florida. He has performed all types and levels of surveys including property, Land Court, mortgage, flood insurance, subdivision, topographic, aerial photo control, and both horizontal and vertical construction. A small sampling of the projects he has worked on includes the ongoing R.O.W. and property takings for the MDPW's Central Artery North Area Project and the MBTA's Bowdoin Connector in Cambridge; the recent topographic survey of 12 parks for the MDEM's Olmsted Historical Landscape Preservation Program; the property and building layout for the Hotel Sonesta in Cambridge; the perimeter and topographic surveys, and construction control for the Lynn Water Treatment Plant; topographic survey of the Massachusetts State House Grounds; and the Land Court survey of Harbor Point, formerly Columbia Point.

Prior to his association with Bryant, Mr. Anderson was responsible for such projects as the construction layout of Center Plaza in Boston; property surveys for General Electric River Works in Lynn, MA; the layout of a 2500 car, curve-linear parking garage and three buildings in Worcester Center, MA; and the complete boundary and construction layout of Worcester Center (20 ± acres) including footing, column, and interior wall layouts.

DOUGLAS V. GOODWIN

Party Chief

EDUCATION/REGISTRATION

B.S.C.E. - Northeastern University

EXPERIENCE

As a member of Bryant Associates staff, Mr. Goodwin was responsible for the establishment of Geodetic controls for the Massachusetts section of AMTRAK Northeast Corridor Improvement Program, and has been active in the topographic survey operations for various site projects and street designs.

Mr. Goodwin has worked on many of the most challenging engineering projects accomplished in the New England area in the role of chief of party, chief of surveys and senior engineering and survey supervisor. His experience spans both field and office work on major highway design and construction projects; railroad surveys; environmental, flood control, bridge, utility, drainage and right-of-way surveys and calculations.

Prior to his association with Bryant Associates he has been in charge of the survey and design of numerous subdivisions throughout Massachusetts; the survey of land for Land Court Titles, and in building construction. He was involved with survey calculations for land takings and alignment of the Boston Extension of the Massachusetts Turnpike and the construction layout of the Beacon Park Railroad yards on that same project.

LEROY W. LINDELL, JR.

Construction Inspector

REGISTRATION

Licensed Class "A" Field Concrete Inspector - Mass. State Building Code Commission.

EXPERIENCE

Mr. Lindell has more than nineteen years experience in the field of construction inspection. He has served in the capacity of Clerk-of-the-Works and Resident Inspector for sanitary sewer and drainage systems, wastewater treatment facilities, pumping stations, street systems, and other civil projects throughout Massachusetts.

Mr. Lindell, as Senior Inspector, is presently observing the construction of several miles of large diameter sewers in Worcester which include jacking and tunneling components. He recently completed a similar project in Boston's South End. This East Berkleley Street project also included installation of large sanitary and drain interceptors with laterals, tide gate structures, manholes and catch basins with total street reconstruction. Prior to this, Mr. Lindell inspected several projects in the South Boston waterfront which included an 8.3 MGD sanitary pumping station, a pile-supported sanitary sewer interceptor, two major street reconstruction contracts with full utility upgrades, and a 1700± car parking lot with drainage, lighting, and an advanced revenue control system.

Prior to joining Bryant Associates he was employed by large consulting engineering firms which specialized in the design of large environmental projects wherein his field experience included the inspection of construction of large diameter conduits and triple barrel conduits.

BRYANT ASSOCIATES

January, 1988

STATEMENT
AFFIRMATIVE ACTION POLICIES AND PRACTICES

Bryant Associates, Inc., being a minority-owned firm, stands committed to the principle of equality of opportunity in employment. We continually assert our efforts to hire employees without discrimination because of race, creed, color, national origin, sex or age and to treat employees equally with respect to compensation and opportunities for advancement. We adhere to this statement and support the Affirmative Action Policy, as stated in the Federal Regulations of September, 1976.

Our commitment to assert leadership within the community and in the Professional Engineering marketplace is on a continuous basis and utilization of the capabilities and productivity of all citizens without regard to race, creed, color, national origin, sex or age.

ASSIGNMENT OF RESPONSIBILITY

The Equal Employment Manager for Bryant Associates, Inc. is Jack D. Bryant, President. He is charged with the responsibility for coordination and the maintenance of the Affirmative Action Program. All management personnel engaged in recruiting, training and other personnel activities, will be fully advised of the policy and of their responsibilities with respect to it.

Bryant Associates Inc.
Census Data
January 28, 1988

Last Name	First	B	M	W	City
Abley	James J.	*			Boston
Anderson	Herbert D.				Wakefield
Barnes	Allan J.				Malden
Barreto	Celia N.	*	*	*	Roxbury
Bryant	Jack D.				Cohasset
Calder	Marie E.	*		*	W. Roxbury
Chukwu	Chima	*	*		Mattapan
Clasby	Alison			*	Southboro
Corbett	Joan	*	*	*	Roxbury
Fagan	Kevin D.	*	*		Dorchester
Frye	Joseph L.	*	*		Boston
Gallo	David S.				Salem
Goldberg	Howard				Newton Centre
Goodwin	Douglas V.				Hudson
Grant	Kathleen	*	*	*	Mattapan
Huggins	Callister	*	*		Mattapan
Hunt	Steven T.	*			Boston
Jackson	Fredrick	*			Hyde Park
Khidhir	Khidhir H.		*		Newton
Lee	Patrick TV	*	*		Dorchester
Lindell	Leroy W.				Seekonk
Louis	Wilner A.	*	*		Dorchester
Lucien	Jean	*	*		Hyde Park
Marcano	Manuel J.		*		Somerville
McCarron	George L.				Marshfield
McHugh	Anna R.			*	Quincy
Mendel	Robert F.	*			Roxbury
Norkin	Benjamin A				Brookline
Nugent	Louise			*	Watertown
Phillips	John J.				Tewksbury
Ridgley	Karen D.	*	*	*	Roxbury
Rivera	David	*	*		Dorchester
Romain	Emile J.	*	*		Boston
Romain	Rudy D.	*	*		Jamaica Plain
Rooney	Brian P.	*			Boston
Satchebelle	Alfred A.	*	*		Roxbury
Schminke	Karen			*	Northboro
Smith	A. Howard				Quincy
Tighe	Lawrence S.				Sudbury
Tirado	Jose	*	*		Roxbury
Valville	Louis D.	*	*		Dorchester
Vazquez	Edward	*	*		Jamaica Plain
Vazquez	Jose G.	*	*		Jamaica Plain
Wilson	Ricardo	*	*		Brighton
Yeaton	Peter A.				Pelham
	Totals:	26	22	9	

Total Employees: 45

B (Employees residing in Boston) 58%

M-(Minority employees) 49%

W (Women Employees) 20%

WATERFRONT/MARITIME

MASSACHUSETTS PORT AUTHORITY

- o Reconstruction of Northern Avenue - Phase I
- o Reconstruction of Northern Avenue - Phase II/III
- o Northern Avenue Parking Lot
- o Northern Avenue/Commonwealth Flats Sanitary Sewer
- o Summer Street Pumping Station - 8.3 MGD
  South Boston, MA

Five separate prime design and construction contracts each ranging from $1.5 to $2.9 million split due to character, funding and timing constraints. Complete reconstruction of 1.4 miles of urban, old waterfront cobble roadway and the construction of a 1,700± space at-grade parking with an advanced revenue control system all with complete upgradings of the utilities in support of present World Trade Center - Boston, Boston Fish Pier, fisheries, and future maritime development.

- o Wharf Rehabilitation - J. F. Moran Container Terminal
- o Site Improvements, Expanded Storage Yard, J. F. Moran Container Terminal
- o Reconstruction of Hoosac Pier
  Charlestown, MA
- o Rehabilitation of the Boston Fish Pier
- o Castle Island Container Port
  South Boston, MA

Subconsultant on five individual contracts for Civil/Site Engineering, Surveys, and Construction Administration for new and reconstructed port facilities. Responsible for preliminary and final design of utilities, drainage, water & sewer systems, access roads, parking facilities and fencing.

BOSTON REDEVELOPMENT AUTHORITY

- o Shipyard Park/Phase II - Pier 4
  Charlestown Navy Yard

Subconsultant for Civil/Site engineering and surveys for base recontruction of Pier 4 for future surface development.

MASSACHUSETTS WATER RESOURCES AUTHORITY

- o Deer Island Secondary Treatment Plant
  On-shore Pier Facilities
  Quincy Shipyard, Quincy, MA
  Revere Sugar, Charlestown, MA

Civil/Site Engineering, topographic and hydrographic surveys, for reconstruction and retro-fitting of existing pier facilities into major barge/ferry ports for transportation of equipment, materials and personnel to Deer Island in support of treatment plant upgrade.

U.S. NATIONAL PARK SERVICE

- Reconstruction of Derby Wharf - Salem, MA

  Prime consultant for site engineering for Wharf rehabilitation. Preliminary and final design, and construction administration for utilities, quay wall repairs, and drainage.

U.S. NAVY - NAVFAC NORTHERN DIVISION

- Pier Modernization - Berths 11,12 & 13
  Portsmouth Navy Yard, NH

  Civil/Site Engineering with supplemental surveys for $55M upgrade of working wharf facilities for refitting of nuclear submarines.

ECONOMIC DEVELOPMENT AND INDUSTRIAL CORPORATION OF BOSTON

- Third Harbor Tunnel Impact Report on
  Boston's Marine Industrial Park
  South Boston, MA

  As Prime, impact assessment of the Third Harbor Tunnel Project on the Park's tenants with engineer's investigations and estimates including the reconstruction of Pier 6 ($5M) and total reconstruction of the Dry Dock No. 3 Facility ($24M) for potential relocation of the General Ship Corporation.

- Boston Marine Industrial Park Study-South Boston, MA

  As Subconsultant, provided all civil engineering expertise and facility information for development/planning study for park development plans for the next 25 years.

SITE DEVELOPMENT

MASSACHUSETTS WATER RESOURCES AUTHORITY

- Early Site Preparation Contract - Deer Island

  First contract awarded by the MWRA to begin the expansion of the Deer Island Wastewater Treatment Plant and the clean-up of Boston Harbor. As Prime, Bryant Associates will provide design and full construction inspection services. The construction is estimate at $15M and includes a new landfill for 100,000 CY of grit and screening's with a leachate pumping station, demolition of the Fort Dawes Facility, reconfiguring the island by the movement of 1.6M CY of drumlin soils, protection of outfall pipes and utilities, a 21E Hazardous Waste Site Assessment, relocation of access facilities such as roadways, parking lots, security houses, recreational fields major coordination with a House of Correction and other on-going construction, and a waste water pumping station.

- On-Shore Pier Facilities - Quincy Shipyard, Quincy, MA
  - Revere Sugar Site Charlestown, MA

  As Subconsultant, responsible for the Civil/Site Engineering, topographic and hydrographic surveys, for reconstruction and retro-fitting of existing pier facilities into major barge/ferry ports for transportation of equipment, materials and personnel to Deer Island in support of treatment plant upgrade.

MASSACHUSETTS PORT AUTHORITY

- Wharf Rehabilitation - J. F. Moran Container Terminal
- Site Improvements, Expanded Storage Yard - J. F. Moran Container Terminal
- Reconstruction of Hoosac Pier
  Charlestown, MA
- Rehabilitation of the Boston Fish Pier
- Castle Island Container Port
  South Boston, MA

  Subconsultant on five individual contracts for Civil/Site Engineering, Surveys, and Construction Administration for new and reconstructed port facilities. Responsible for preliminary and final design of utilities, drainage, water & sewer systems, access roads, parking facilities and fencing.

- Northern Avenue Parking Lot - South Boston, MA

  A 1700± at grade parking lot on Commonwealth Flats with a sophisticated revenue control system to serve all Massport tenants, primarily the World Trade Center. Future drainage piping was installed ranging from 36" to 60".

MASSACHUSETTS DIVISION OF CAPITAL PLANNING AND OPERATIONS

- Salem State College Comprehensive Facilities Plan-Salem, MA

As Subconsultant, responsible for all civil engineering for development program of College's Main and South Campuses, and Athletic Facility.

- Massachusetts Correctional Institute - Shirley, MA
- Bristol County Jail and House of Correction - Dartmouth, MA
- Norfolk County Jail - Dedham, MA

Three separate contracts as the Subconsultant responsible for civil and site engineering for expansion and new facilities. Complete topographic surveys with utilities was provided for the MCI Shirley project.

- New Athletic Facility, Fitchburg State College-Fitchburg, MA

As Subconsultant, provided civil and site engineering services.

ECONOMIC DEVELOPMENT AND INDUSTRIAL CORPORATION OF BOSTON

- Third Harbor Tunnel Impact Report on Boston's Marine Industrial Park South Boston, MA

As Prime, formulated an impact assessment report of the Third Harbor Tunnel Project on the Park's tenants with engineers investigations and estimates including the reconstruction of Pier 6 ($5M) and total reconstruction of the Dry Dock No. 3 Facility ($24M) for potential relocation of the General Ship Corporation.

- Boston Marine Industrial Park Study - South Boston, MA

As Subconsultant, provided all civil engineering expertise and facility information for development/planning study for park development plans for the next 25 years.

UNITED STATES POSTAL SERVICE

- Middlesex/Essex General Mail Facility (GMF)-North Reading, MA
- Worcester Postal Facility - Shrewsbury, MA

Two separate postal facilities for which Bryant Associates provide the civil and site engineering. The North Reading facility is a 225,000 sq. GMF on a 25± acre site while the Worcester GMF is a 135,000 sq. ft. GMF on an 8± acre site

- USPS Engineering and Surveying - Southeast MA and RI

  Bryant Associates has been awarded a one year contract to provide the Postal Service engineering and surveys services on an on-call basis for various sites in Southeast Massachusetts and Rhode Island.

- Site Location Studies - Various New England Locations

  Site location and building development studies for six proposed sites, four in MA and two in VT. Responsible for a combination of site surveying and assessing utility services as a Subconsultant.

UNITED STATES AIR FORCE AND NAVY

- Personnel Housing - Loring Air Force Base, ME
- Library/Education Center-Hanscom Air Force Base, Bedford, MA
- Navy B.O.Q. Building - Newport R.I.
- Navy Submarine School - New London, CT
- Enlisted Men's Quarters - Weymouth Naval Air Station, Weymouth, MA

  As Subconsultant, provided the civil/site engineering and surveys for four separate contracts.

BOSTON HOUSING AUTHORITY

- Archdale Housing Development - West Roxbury, MA
- West Broadway Housing Development - South Boston, MA

  Two separate contracts as Subconsultant to provide topographic surveys with utilities and civil/site engineering.

EDUCATIONAL INSTITUTIONS

- Science and Technology Center, Syracuse University - Syracuse, NY
- Student Dormitories Expansion, University of Lowell - Lowell, MA

  As Subconsultant, provided civil and site engineering services including utilities.

PRIVATE DEVELOPMENT

- 125 Unit Townhouse Condominium Development - Hingham, MA
- 175 Unit Townhouse Condominium Development - Braintree, MA

  As Subconsultant, responsible for civil/site engineering, and additionally in Hingham, the topographic surveys.

- Conifer Hill Executive Office Park - Danvers, MA

  Surveying and civil engineering designs for five - 2 story office condominiums and two - 4 story office buildings. Total office area in excess of 200,000 sq. ft.

- Hawthorne Office Park - Danvers, MA

  Surveying and civil engineering design for two - 2 story office buildings totalling 30,000 sq. ft.

SURVEYS

The majority of roadway and site development projects designed by Bryant Associates include the preparation of topographic plan with utilities and property surveys accomplished in-house.

- Professional Services - Engineering & Surveys - 1987/88
  Massachusetts Water Resources Authority

- General Services - Surveys - 1985 through 1988
  Boston Water and Sewer commission

  Two separate prime contracts to provide the above services on an as-needed, work order basis for a period of one year. The BWSC has awarded BAI the contract four consecutive years.

  Performed various individual work orders which included pre-construction layouts, as-built measurements, preparation of easements, property plans, descriptions, topographic surveys, soundings, sediment surveys, calculations and drafting.

- Federal Express Distribution Warehouse
  East Berkeley Street, South End, Boston, MA
  Federal Express

- Albany Street Garage and Maintenance Facility
  South End, Boston, MA
  Massachusetts Bay Transportation Authority

- Roxbury Community College, Roxbury, MA
  Department of Capital Planning and Development

- Roxbury Heritage State Park
  Melnea Cass Blvd., South End, Boston, MA
  Department of Environmental Management

  Four separate contracts to provide property and topographic (partial for State Park) surveys with utilities followed by civil/site engineering.

- Northeast Corrider Project
  Federal Rail Administration

  As Subconsultant, provided topographic with utilities and base line surveys of RR corridor paralleling the MBTA's new Southwest Corrider Project along the north boundary of the South End.

- Lowell Historical National Park
  Lowell, MA
  Lowell Historic Preservation Commission

  As Prime, provided easement and property plans with descriptions, topographic and "as-built" plans at various stages of the Park's development and expansion.

- Northern Avenue/Commonwealth Flats
  South Boston, MA
  Massachusetts Port Authority

  Consulting engineering and surveying services including complete topographic, utility, and easement/property line surveys. Various permanent easements were prepared for lease, access, and utility considerations for transfer to the World Trade Center partnership, the City of Boston, and the Boston Water and Sewer Commission.

- Bowdoin/Charles Connector
  Beacon Hill, Boston, MA
  Massachusetts Bay Transportation Authority

  Complete mapping services, photogrammetric as well as topographic of Cambridge Street between Charles Circle and Government Center. This project also included working at night within the MBTA's Blue Line Tunnel System.

- Central Artery - North Area (CANA)
  Charlestown, MA
  Massachusetts Department of Public Works

  A topographical survey for both sections of the North Area of the Central Artery including establishment of baselines and benchruns, all topographic features and underbridge measurements. Preparation of ROW plans.

- Prison Expansions - Concord, Framingham & Norfolk, MA
  Gilbane Building Company

- Suffolk County Jail - Boston, MA
  George Hyman Construction Company

  Establish the construction layout for the building expansion of three prisons and for the construction of a new jail under a design-build program.

- Utica Unloading Facility - Utica, NY
  Agchem Siding Survey - Cohocton, NY
  New York State Department of Transportation

  As Subconsultant in three separate contracts provided topographic survey with utilities and the preparation of a property acquisition maps for railroad sidings and rail unloading facilities.

- New York City Resource Recovery Facilities
  New York City Department of Sanitation

  As Subconsultant, provided topographic mapping by aerial photography with utilities and property line surveys for waste reclamation centers.

NORTHERN AVENUE RECONSTRUCTION
South Boston, MA

CURLEY MEMORIAL PARK
Boston, MA

CHILDS ENGINEERING CORPORATION

Childs Engineering Corporation was founded in 1970 as a consulting waterfront structural engineering firm which in addition to design and construction supervision, also provides underwater inspection by its diving engineers. Waterfront projects such as piers, retaining walls, marinas, slope protection, vessel mooring and underwater inspections have been done in North America, the Caribbean, Europe, Africa and the Pacific Islands. Since we specialize in waterfront work, we are active in numerous professional societies (American Society of Civil Engineers, American Concrete Institute, American Wood Preservers Association, Society of Naval Architects and Marine Engineers) and trade associations (Propellor Club, Massachusetts Association of Passenger Vessel Owners and Operators, Canadian Shipbuilders and Ship Repairers Assocation).

We are aware of the ongoing studies in the use of treated timber piles in saltwater. We are aware of and have used Greenheart, Ekki, and Basralocus timber in the construction of piers. These kinds of timbers have not been used extensively in the past because of their relative higher cost and unavailability in the United States. Greenheart has always been available and now we have found sources for the purchase of Ekki and Basralocus in the United States. These materials have some excellent characteristics. Not only are they highly resistant to marine borers but they are also strong, hard and therefore not subject to vandalism and are relatively fire-resistant. We believe the time has finally come when these materials will begin to be used extensively in the United States. We have used Greenheart in the U.S. while our experience with the African hardwoods has been in Europe.

We have also worked with concrete and steel in designing pier structures. The U.S. Coast Guard Pier which we designed in Provincetown has concrete piles and superstructure. The pier addition we designed in Eastport, ME has steel piles and concrete superstructure.

Our experience in the design of heavy piers for large vessels together with the design of marinas and our present ongoing study with the BRA for the standards for the design of loading facilities for the harbor ferries/shuttles/water taxis will give us background for developing the needed facilities at Pier 3 for vessels of whatever size contemplated. We designed the ramp facilities for the "QEII" and the breasting dolphin and ramp facilities for the "Oceanic" used at the World Trade Center Boston during DEC World '87. We also designed the new ferry facilities for the Casco Bay Lines in Portland, ME and the revision of the ferry facilities in Lincolnville, Islesboro, and Little Diamond Island in Maine.

We have inspected above and below water over 500 waterfront structures which contain more than 500,000 piles and 35 miles of bulkhead. We always keep in mind, however, that we are not going to lose sight of the forest because of all the trees. Each individual pier becomes an entire project to us.

We have designed waterfront parks and amenities such as parking, walkways, fishing sites, marina access facilities and so forth for many waterfront projects in Boston as well as other cities. Carol R. Johnson & Associates,Inc. together with Childs Engineering Corporation as one of its consultants were presented the American Society of Landscape Architects honor award for the Revere Beach Reservation Master Plan.

We have experience in the supervision of construction of projects and heartily applaud the BRA for including resident engineering services during the construction phase. On the projects in which we have supplied full-time resident inspection services we have found that the construction went very smoothly. Questions of design and specification interpretation were able to be answered immediately rather than delaying the project. Job cost extras were kept to a minimum and were reasonable.

Permits and licenses from the local Conservation Committee, the Commonwealth of Massachusetts and the U.S. Army Corps of Engineers are required for every local government and private waterfront project. There is a minimum level of effort and as the projects increase in magnitude and scope, the level of effort increases. We have participated in permitting/licensing projects from repairs to 24 piles under a pier to the Rowes Wharf development to dredging in Chelsea. We have acted as consultants and we have secured all of the permits/licenses on projects. Inasmuch as some of the work has been done already, the procedure for this project should be straight-forward. Whatever problems might arise, we can work with the BRA to solve them. We also have considerable experience in attending and testifying before public meetings and hearings. In fact, the president of Childs Engineering has experience as a Planning Board member and Selectman in conducting public meetings.

STANDARD FORM (SF)

254

Architect-Engineer and Related Services Questionnaire

1. Firm Name / Business Address:

CHILDS ENGINEERING CORPORATION
541 Main Street, P. O. Box 333
Medfield, MA 02052

1a. Submittal is for ☒ Parent Company ☐ Branch or Subsidiary Office

2. Year Present Firm Established: 1970

3. Date Prepared: January 1988

4. Specify type of ownership *and* check below, if applicable

Corporation DUNS #06-658-6132

☒ A. Small Business
☐ B. Small Disadvantaged Business
☐ C. Woman-owned Business

5. Name of Parent Company, if any:

CHILDS ENGINEERING CORPORATION

5a. Former Parent Company Name(s), if any, and Year(s) Established:

N/A

6. Names of not more than Two Principals to Contact: Title / Telephone

1) KENNETH M. CHILDS, JR., PRESIDENT (617)359-8945
2) DAVID L. PORTER, VICE PRESIDENT (617)359-8945

7. Present Offices: City / State / Telephone / No. Personnel Each Office

Medfield, Massachusetts (617)359-8945) Sixteen Full-Time
Three Part-Time

7a. Total Personnel 19

8. Personnel by Discipline: *(List each person only once, by primary function)*

4 Administrative
___ Architects
___ Chemical Engineers
2 Civil Engineers /Diver
2 Construction Inspectors/Diver
3 Draftsmen
___ Ecologists
___ Economists
___ Electrical Engineers
1 Estimators
___ Geologists
___ Hydrologists
___ Interior Designers
___ Landscape Architects
1 Mechanical Engineers/Diver
___ Mining Engineers
___ Oceanographers
___ Planners: Urban/Regional
___ Sanitary Engineers
1 Soils Engineers/Diver
1 Specification Writers
3 Structural Engineers /Diver
___ Surveyors
___ Transportation Engineers
1 Ocean Engineer/Diver

9. Summary of Professional Services Fees Received: (Insert index number)

Last 5 Years (most recent year first)

	1987	1986	1985	1984	1983
Direct Federal contract work, including overseas	3	2	2	2	2
All other domestic work	3	3	3	3	3
All other foreign work*	1	1	1	1	1

*Firms interested in foreign work, but without such experience, check here: ☐

Ranges of Professional Services Fees

INDEX	
1.	Less than $100,000
2.	$100,000 to $250,000
3.	$250,000 to $500,000
4	$500,000 to $1 million
5.	$1 million to $2 million
6.	$2 million to $5 million
7.	$5 million to $10 million
8.	$10 million or greater

Experience Profile Code Numbers for use with questions 10 and 11

001 Acoustics; Noise Abatement
002 Aerial Photogrammetry
003 Agricultural Development; Grain Storage; Farm Mechanization
004 Air Pollution Control
005 Airports; Navaids; Airport Lighting; Aircraft Fueling
006 Airports; Terminals & Hangars; Freight Handling
007 Arctic Facilities
008 Auditoriums & Theatres
009 Automation; Controls; Instrumentation
010 Barracks; Dormitories
011 Bridges
012 Cemeteries *(Planning & Relocation)*
013 Chemical Processing & Storage
014 Churches; Chapels
015 Codes; Standards; Ordinances
016 Cold Storage; Refrigeration; Fast Freeze
017 Commercial Buildings *(low rise)*; Shopping Centers
018 Communications Systems; TV; Microwave
019 Computer Facilities; Computer Service
020 Conservation and Resource Management
021 Construction Management
022 Corrosion Control; Cathodic Protection; Electrolysis
023 Cost Estimating
024 Dams *(Concrete; Arch)*
025 Dams *(Earth; Rock)*; Dikes; Levees
026 Desalinization *(Process & Facilities)*
027 Dining Halls; Clubs; Restaurants
028 Ecological & Archeological Investigations
029 Educational Facilities; Classrooms
030 Electronics
031 Elevators; Escalators; People-Movers
032 Energy Conservation; New Energy Sources
033 Environmental Impact Studies, Assessments or Statements
034 Fallout Shelters; Blast-Resistant Design
035 Field Houses; Gyms; Stadiums
036 Fire Protection
037 Fisheries; Fish Ladders
038 Forestry & Forest Products
039 Garages; Vehicle Maintenance Facilities; Parking Decks
040 Gas Systems *(Propane; Natural, Etc.)*
041 Graphic Design
042 Harbors; Jetties; Piers; Ship Terminal Facilities
043 Heating; Ventilating; Air Conditioning
044 Health Systems Planning
045 Highrise; Air-Rights-Type Buildings
046 Highways; Streets; Airfield Paving; Parking Lots
047 Historical Preservation
048 Hospital & Medical Facilities
049 Hotels; Models
050 Housing *(Residential, Multi-Family; Apartments; Condominiums)*
051 Hydraulics & Pneumatics
052 Industrial Buildings; Manufacturing Plants
053 Industrial Processes; Quality Control
054 Industrial Waste Treatment
055 Interior Design; Space Planning
056 Irrigation; Drainage
057 Judicial and Courtroom Facilities
058 Laboratories; Medical Research Facilities
059 Landscape Architecture
060 Libraries; Museums; Galleries
061 Lighting *(Interiors; Display; Theatre, Etc.)*
062 Lighting *(Exteriors; Streets; Memorials; Athletic Fields, Etc.)*
063 Materials Handling Systems; Conveyors; Sorters
064 Metallurgy
065 Microclimatology; Tropical Engineering
066 Military Design Standards
067 Mining & Mineralogy
068 Missile Facilities *(Silos; Fuels; Transport)*
069 Modular Systems Design; Pre-Fabricated Structures or Components
070 Naval Architecture; Off-Shore Platforms
071 Nuclear Facilities; Nuclear Shielding
072 Office Buildings; Industrial Parks
073 Oceanographic Engineering
074 Ordnance; Munitions; Special Weapons
075 Petroleum Exploration; Refining
076 Petroleum and Fuel *(Storage and Distribution)*
077 Pipelines *(Cross-Country—Liquid & Gas)*
078 Planning *(Community, Regional, Areawide and State)*
079 Planning *(Site, Installation, and Project)*
080 Plumbing & Piping Design
081 Pneumatic Structures; Air-Support Buildings
082 Postal Facilities
083 Power Generation, Transmission, Distribution
084 Prisons & Correctional Facilities
085 Product, Machine & Equipment Design
086 Radar; Sonar; Radio & Radar Telescopes
087 Railroad; Rapid Transit
088 Recreation Facilities *(Parks, Marinas, Etc.)*
089 Rehabilitation *(Buildings; Structures; Facilities)*
090 Resource Recovery; Recycling
091 Radio Frequency Systems & Shieldings
092 Rivers; Canals; Waterways; Flood Control
093 Safety Engineering; Accident Studies; OSHA Studies
094 Security Systems; Intruder & Smoke Detection
095 Seismic Designs & Studies
096 Sewage Collection, Treatment and Disposal
097 Soils & Geologic Studies; Foundations
098 Solar Energy Utilization
099 Solid Wastes; Incineration; Land Fill
100 Special Environments; Clean Rooms, Etc.
101 Structural Design; Special Structures
102 Surveying; Platting; Mapping; Flood Plain Studies
103 Swimming Pools
104 Storm Water Handling & Facilities
105 Telephone Systems *(Rural; Mobile; Intercom, Etc.)*
106 Testing & Inspection Services
107 Traffic & Transportation Engineering
108 Towers *(Self-Supporting & Guyed Systems)*
109 Tunnels & Subways
110 Urban Renewals; Community Development
111 Utilities *(Gas & Steam)*
112 Value Analysis; Life-Cycle Costing
113 Warehouses & Depots
114 Water Resources; Hydrology; Ground Water
115 Water Supply, Treatment and Distribution
116 Wind Tunnels; Research/Testing Facilities Design
117 Zoning; Land Use Studies
201 Dry Dock Design
202 ____________
203 ____________
204 ____________
205 ____________
214 Underwater Inspection
251 Research & Development

10. Profile of Firm's Project Experience, Last 5 Years

Profile Code	Number of Projects	Total Gross Fees (in thousands)	Profile Code	Number of Projects	Total Gross Fees (in thousands)	Profile Code	Number of Projects	Total Gross Fees (in thousands)
1) 042	60	1,300	11) 079	5	100	21)		
2) 088	20	400	12)			22)		
3) 089	20	500	13)			23)		
4) 092	2	150	14)			24)		
5) 093	10	75	15)			25)		
6) 201	40	400	16)			26)		
7) 106	10	200	17)			27)		
8) 112	5	50	18)			28)		
9) 214	30	1,100	19)			29)		
10) 251	5	50	20)			30)		

11. Project Examples, Last 5 Years

Profile Code	"P", "C", "JV", or "IE"	Project Name and Location	Owner Name and Address	Cost of Work (in thousands)	Completion Date (Actual or Estimated)
042	P	1 Various Repairs to Waterfront Facilities, Norfolk Naval Shipyard Portsmouth, VA	Naval Facilities Engineering Command Chesapeake Division, Washington Navy Yard, Washington, DC	3,000	1987
042	P	2 Marine Terminal Modifications City of Portland Portland, ME	City of Portland Portland, ME	3,700	1988
042	C	3 Eastport Port Authority Breakwater Rehabilitation Eastport, ME	Eastport Port Authority Eastport, ME	2,500	1984
042	P	4 Reconstruction of Tanker & Barge Facilities Chelsea, MA	Ultramar Petroleum, Inc. 500 Neponset Avenue Boston, MA	500	1984
042	P	5 Steel Pile Repairs Mystic Pier No. 1	Massachusetts Port Authority 10 Park Plaza Boston, MA	6,200	1986
092	C	6 Pavilion Seawall Repairs Revere Beach, Revere, MA	Metropolitan District Commission 20 Somerset Street Boston, MA	2,200	1988
089	P	7 Rehabilitation of Building Foundation Open Pier Structure, Boston, MA	Wayne & Lazares 95 Commercial Wharf Boston, MA	300	1986

089	P	8 Rehabilitation of Relieving Platform and Steel Sheet Pile Bulkhead	Cibro Petroleum, Inc. 1066 Zerega Avenue Bronx, NY	500	1986
089	P	9 Rehabilitation of Piers & Bulkheads Boston Naval Shipyard Charlestown, MA	National Park Service Denver, CO	3,000+	1984
089	C	10 Commonwealth Pier Rehabilitation Boston, MA	BOSCOM Boston, MA	2,000	1984
079	C	11 Development Study Massport Piers Boston, MA	Massachusetts Port Authority 10 Park Plaza Boston, MA	80 (Fee)	1988
092	C	12 Early Site Improvements Lechmere Canal & Park Cambridge, MA	City of Cambridge Cambridge, MA	1,300	1982
093	P	13 Investigation of Breasting Dolphins Failure, U. S. Naval Base Rota, Spain	Naval Facilities Engineering Command Chesapeake Division, Washington Navy Yard, Washington, DC	20 (Fee)	1983
089	P	14 International Ferry Terminal Rehabilitation, Portland, ME	City of Portland Porltand, ME	400	1988
089	P	15 Rehab Chelsea River Crossing Fenders Chelsea, MA	Boston Gas Company 201 Rivermoore Street West Roxbury, MA	450	1987
101	P	16 Shipyard & Dry Dock Facilities Gloucester, MA	Gloucester Dry Dock & Marine Repair Company, Inc. Gloucester, MA	1,000	1982
101	JV	17 3400-Tonne & 1000-Tonne Marine Railways Sydney, Nova Scotia	Sydney Engineering & Dry Dock Co., Ltd., P. O. Box 100 Sydney, Nova Scotia B1P 6G9	3,800	1985
106	P	18 Certification of 3000-Ton Marine Railway, Shelburne, Nova Scotia	Shelburne Marine, Ltd. P. O. Box 940 Shelburne, Nova Scotia BOT-1WO	10 (Fee)	1987
106	C/P	19 Certification of Basin Docks and Preparation of Maintenance Manual	General Dynamics Electric Boat Division, Groton, CT	30 (Fee)	1986

112	P	20 Survey of Techniques for Maintenance/ Repair of Waterfront Structures	Civil Engineering Laboratory Naval Construction Battalion Center Port Hueneme, CA	10 (Fee)	1985
214	P	21 Underwater Inspection of Bridge Abutments, Massachusetts	Massachusetts Turnpike Authority 668 South Avenue Weston, MA	50 (Fee)	1988
214	C	22 Underwater Inspection & Structural Evaluation of Upper Mechanical Dam	New York State Electric & Gas Corp. Binghamton, NY	15 (Fee)	1984
214	C	23 Underwater Inspection & Assessment Cape Cod Canal Railroad Bridge Abutments	U. S. Army Corps of Engineers New England Division Waltham, MA	15 (Fee)	1984
214	C	24 Inspection & Assessment of Berths #12 and #13, Castle Island Terminal Boston, MA	Massachusetts Port Authority Boston, MA	3,000	1986
214	C	25 Underwater Inspection and Assessment of MBTA Bridges, Greater Boston Area	Mass Bay Transportation Authority Boston, MA	1,500	1987
201	P	26 Modify Floating Dry Dock Detroit, MI	Nicholson Marine Terminals River Route, MI	15	1987
088	C	27 Rowes Wharf Marina Design Boston, MA	The Beacon Companies 50 Rowes Wharf Boston, MA	1,500	1988
214	P	28 Inspection & Design Repairs Moran Container Terminal, Boston, MA	Massachusetts Port Authority Boston, MA	2,700	1988
214	P	29 Underwater Inspection & Assessment of U.S. Navy Facilities Worldwide	Naval Facilities Engineering Command Chesapeake Division Washington, DC	400 (Fee)	1988
251	P	30 Investigation & Analysis of Effects of Jacketing Steel Piles	Naval Facilities Engineering Command Chesapeake Division Washington, DC	9 (Fee)	1982

12. The foregoing is a statement of facts

Signature: Kenneth M. Childs Jr.

Typed Name and Title: Kenneth M. Childs, Jr., President

Date: January 27, 1988

RONALD R. BOURNE - VICE PRESIDENT, CHILDS ENGINEERING CORPORATION

Project Leader - Pier and Boat Facilities

B.S. - Civil Engineering, University of Vermont 1976
Masters-Business Administration Northeastern University 1988

Registered Profession Engineer - Vermont, Massachusetts, New York, Connecticut, New Jersey

Mr. Bourne has served as project manager and project engineer on many waterfront projects. His experience includes the design of piers, wharves, fender systems, buildings, sanitary and storm sewer drainage systems, roadways and bridges. Mr. Bourne served as project engineer for the Eastport Breakwater Expansion project. He was responsible for the layout and design of the pier expansion and for the design of the fendering systems for the facility. He has served as the project manager for the rehabilitation and design of the tanker and barge offloading facilities for the Ultramar Petroleum, Chelsea, MA facility.

Mr. Bourne's experience in projects directly related to this project are:

Project engineer for the design of the relocated ferry terminal for Casco Bay lines in Portland, ME. This project included the design of new facilities to handle both the large and small ferries operated by Casco Bay Lines. It also included the repairs to the existing Maine State Pier, the site of the new terminal.

Project manager for the design of the rehabilitation of two ferry terminals at Lincolnville and Islesboro, ME.

Project manager for the project to inspect and repair the timber piles and retaining wall at Conley Terminal in South Boston for the Massachusetts Port Authority.

Project manager on several projects in Boston Harbor, Maine and Vermont where environmental permits were obtained.

Inspection above water, supervising the underwater inspection, preparation of report of conditions of Piers 2 and 5 at Charlestown Navy Yard.

Mr. Bourne has been with Childs Engineering since 1978.

RICHARD G. FITZGERALD - SENIOR ENGINEER, CHILDS ENGINEERING CORP.

Project Engineer

B.S. - Civil Engineering, University of Rhode Island 1979

Registered Professional Engineer - Rhode Island
Certified Marine Diver - P.A.D.I.

Mr. FitzGerald has been responsible as the design engineer on several major waterfront projects. His involvement includes the inspection, assessment, design and construction supervision of piers, bulkheads, breakwaters, ferry terminals and underwater pipeline crossing fenders. He has also been involved in the research and development of undersea vehicles and the dynamics of fluid flow in the structural design of ocean structures. Included in many of the waterfront designs have been the preparation of permit and license drawings and applications.

Among his experience, the following projects are similar to the project in hand:

Design of the new Casco Bay Lines Ferry Terminal facility

Inspection and repair design of the existing "breakwater" pier and design of the fendering for the pier addition in Eastport, ME.

Preparation of permit and license applications for several different projects in Chelsea.

Construction supervision for the protective fender and pipeline support construction at the Boston Gas pipeline crossing in East Boston.

Inspection above and below water of piers and retaining walls in Boston Harbor; Portland and Eastport, Maine; Philadelphia; Norfolk, Virginia; Washington State; Oregon, Pearl Harbor and Hawaii. Included in these inspections were the preparation of condition reports, suggested repair designs and repair cost estimates.

Resident engineer in the repair of dolphins protecting the Boston Gas line crossing in Chelsea Creek. During the construction, the effects of the pile driving on an adjacent seawall were monitored using seismic equipment.

Mr. FitzGerald has been with Childs Engineering since 1982.

SWORN STATEMENT
REGARDING EQUAL EMPLOYMENT OPPORTUNITY

The undersigned, being first duly sworn, on oath states to the Executive Dir. of MWRA on behalf of the Proposer as follows:

A. This Sworn Statement Regarding Equal Employment Opportunity constitutes the Proposer's plan of affirmative action to be followed in the event a contract is awarded to the Proposer to ensure equal employment opportunity is afforded by the Proposer and the Proposer's subcontractors while providing specific materials and supplies or consulting or construction services for the Authority.

B. The Proposer agrees that submission of this Sworn Statement constitutes an acknowledgement of the Authority's equal employment opportunity requirements.

C. The Proposer hereby designates:

Name: Kenneth M. Childs, Jr.
Title: President

as the person who has been charged by the Proposer with the responsibility for carrying out and reporting the Proposer's compliance with this plan of affirmative action.

D. The Proposer gives assurance that this plan of affirmative action will be communicated to supervisors and other employees of the Proposer.

E. The Proposer gives assurance that the Proposer's work force on the project will include substantial percentages of minorities and women, and that the percentages set forth on the Proposer's Project Employment Profile will be the Proposer's minimum levels of commitment to minority and women employment during this project. Underrepresentation of minorities and women will not itslf be deemed a violation of Authority's policy, where the Consultant adopts reasonable affirmative action measures in good faith.

F. The Proposer gives assurance that the Proposer will correct deficiencies of underrepresented persons at all

levels of the work force by considering underrepresented persons to fill new positions and vacancies. If additional persons are employed as part of the work force, the Proposer shall make every reasonable effort to meet the equal employment opportunity goals established by the Authority for this project.

G. The Proposer gives assurance that the Proposer will make continuing efforts to recruit minority and female employees, to advertise employment opportunities in ways which will effectively reach minorities and females, and to include in all solicitations or advertisements for employees placed by or on behalf of the Proposer a statement that the Proposer is an "Equal Opportunity Employer."

H. The Proposer gives assurance that the Proposer will provide opportunity for training and advancement for minorities and women.

Childs Engineering Corporation
Name of Proposer
By:
Title: President, Kenneth M. Childs, Jr.

State of Massachusetts

County of Norfolk

I certify that I know or have satisfactory evidence that [illegible] signed this instrument, on oath stated that (he/she) was authorized to execute the instrument and acknowledged it as the [illegible] of [illegible] to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Date: 7/-/87

(Stamp or Seal)

(Signature of notary public)

Notary Public
Title

My appointment expires 11/5/87

PIERS 1, 2, 3 AND 5

DRY DOCK NO. 1

CHARLESTOWN NAVY YARD

NATIONAL PARK SERVICE
BOSTON NATIONAL HISTORICAL PARK
BOSTON, MASSACHUSETTS

INVESTIGATION AND EVALUATION OF THE WATER SEEPAGE OCCURRING IN DRYDOCK NO. 1

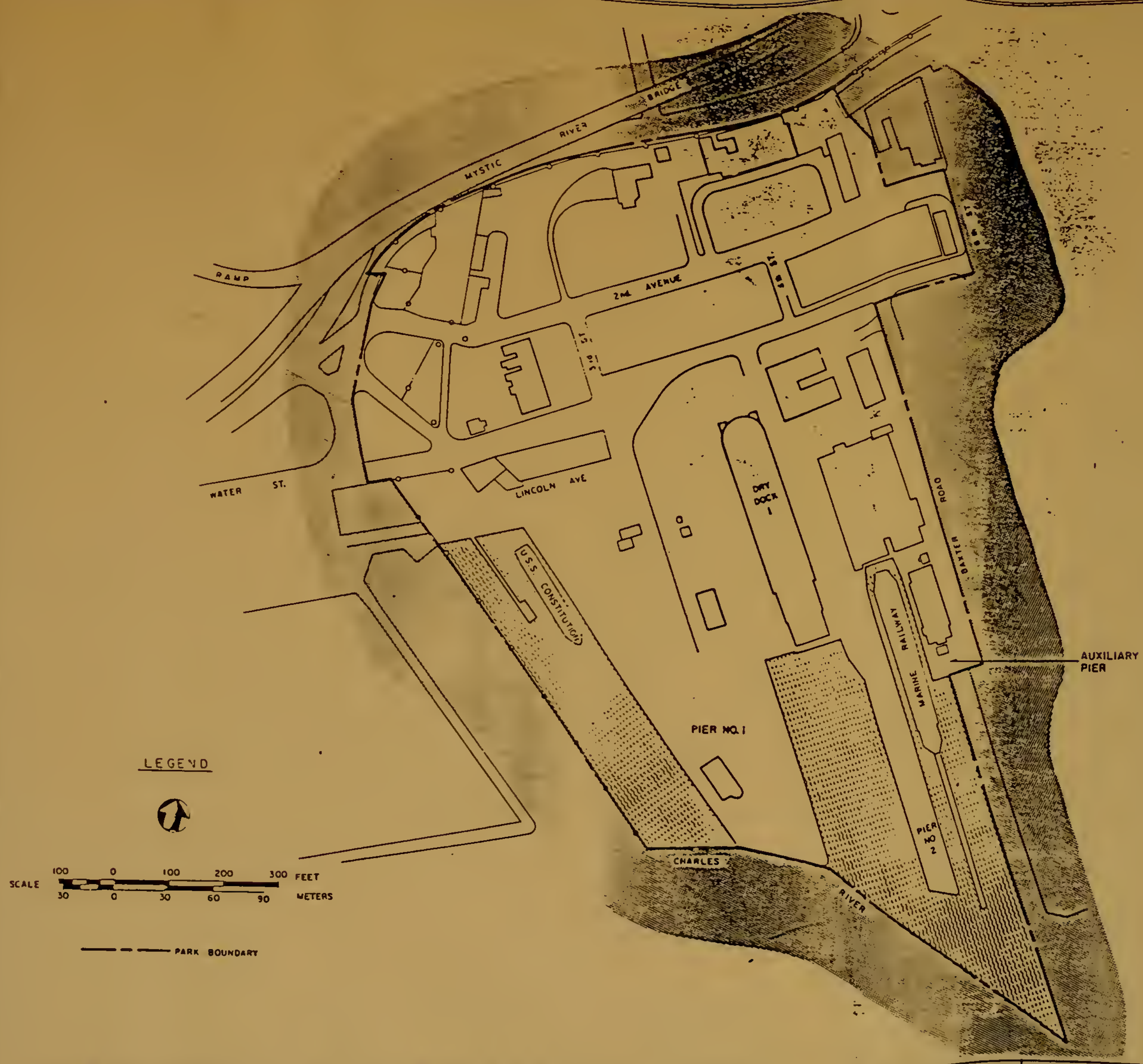
MARCH, 1979

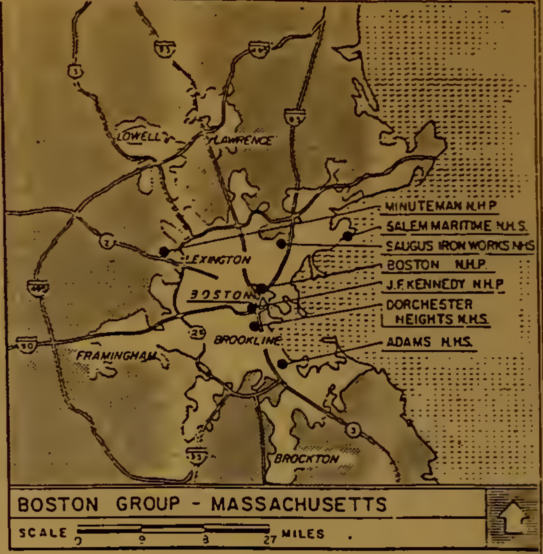
FINAL SUBMITTAL - OCTOBER 30, 1979

PREPARED BY
CHRISTOPHER J. FOSTER, INC.
PORT WASHINGTON, N.Y.

CONSULTANTS TO
CHILDS ENGINEERING CORPORATION
Box 333
MEDFIELD, MA 02052

WORK DIRECTIVE NO. 8-0054-79-
BASIC AGREEMENT NO. CX-2000-8-00





INDEX TO SHEETS

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SITE PLAN 2
FENDER SYSTEM REPAIRS, PIER 1, STATION 0+00 TO 1+50 3
FENDER SYSTEM REPAIRS, PIER 1, STATION 1+50 TO 3+50 4
FENDER SYSTEM REPAIRS, PIER 1, STATION 3+50 TO 6+25 5
FENDER SYSTEM REPAIRS, PIER 1, STATION 6+25 TO 9+00 6
FENDER SYSTEM REPAIRS, PIER 1, STATION 9+00 TO 13+00 7
FENDER SYSTEM REPAIRS, PIER 1, STATION 13+00 TO 13+60 AND DETAILS 8
STEEL SHEET PILE REPAIRS, PIER 1, STATION 0+00 TO 4+25 9
STEEL SHEET PILE REPAIRS, PIER 1, STATION 4+25 TO 7+16 10
STEEL SHEET PILE REPAIRS, STATION 13+60 TO 13+96, 14+96 TO 15+32 11
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CONCRETE ARCH REPAIRS, ARCH 13 TO 10 13
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CONCRETE ARCH REPAIRS, ARCH 5 TO 2 15
CONCRETE ARCH REPAIRS, ARCH 1 AND DETAILS 16
FINGER PIER, WALKWAY REPAIRS 17
FINGER PIER, PLATFORM REPAIRS 18
AUXILIARY PIER REPAIRS, STATION 19+50 TO 20+61.5 19
MISCELLANEOUS DETAILS 20

REDUCED SIZE REPRODUCTION
IFB 1720-79B - R

REHABILITATION OF BULKHEADS AND PIERS

BASIC DATA HISTORIC STRUCTURE REPORT NPS DRAWING NO 457/28003

REVISIONS	DATE	INT
REVISED & REISSUED		
"A" REVISION	11/79	EY

CONSTRUCTION DRAWING
This drawing has been prepared in compliance with the Historic Structure Report
Approved by Jack E. Stark
Regional Director Feb 1979
Manager DSC 7-91-79 Date

CONSTRUCTION DRAWING

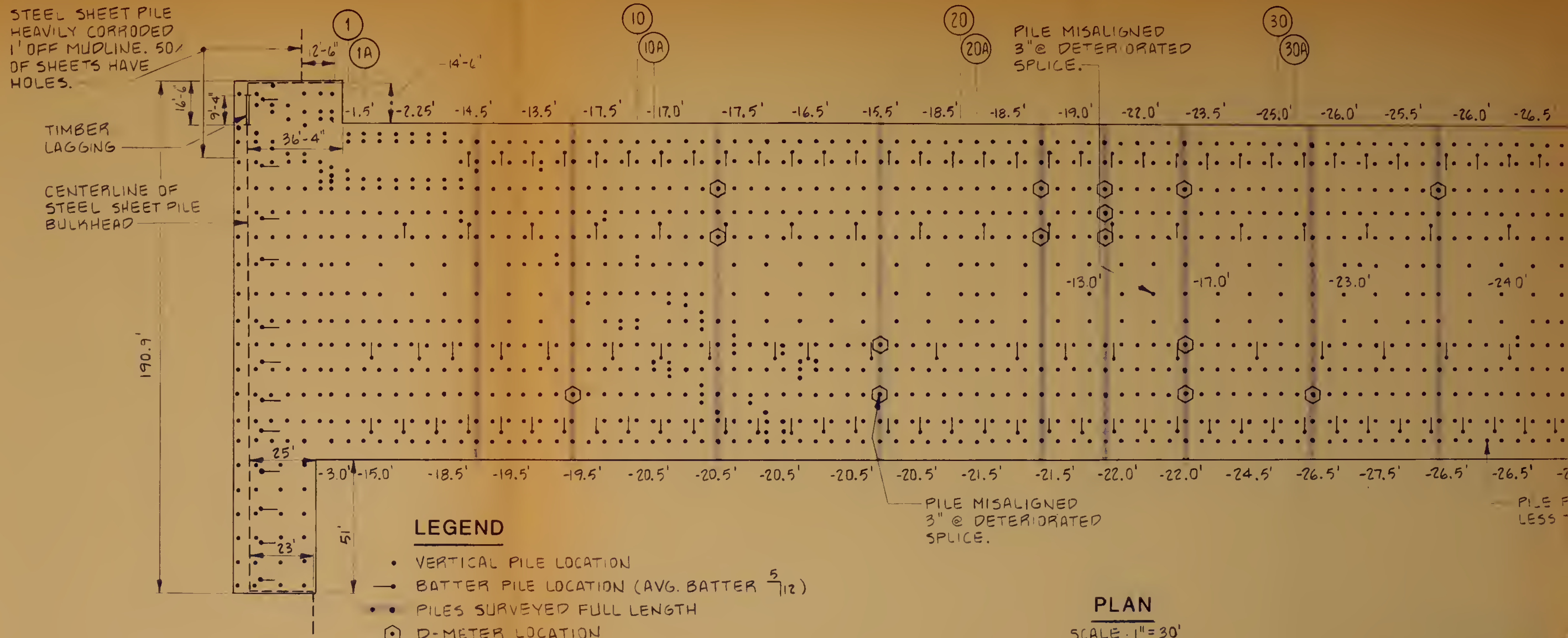
UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
DENVER SERVICE CENTER

PREPARED
DESIGNED
DRAWN
CHECKED
DATE

TITLE OF DRAWING
REHABILITATION OF BULKHEADS AND PIERS
LOCATION WITHIN PARK
CHARLESTOWN NAVY YARD
NAME OF PARK
BOSTON NATIONAL HISTORICAL PARK
NORTH ATLANTIC REGION
SUFFOLK COUNTY
MASS STATE

DRAWING NO
457
25008A
PKG NO 111
SHEET 1 OF 20



LEGEND

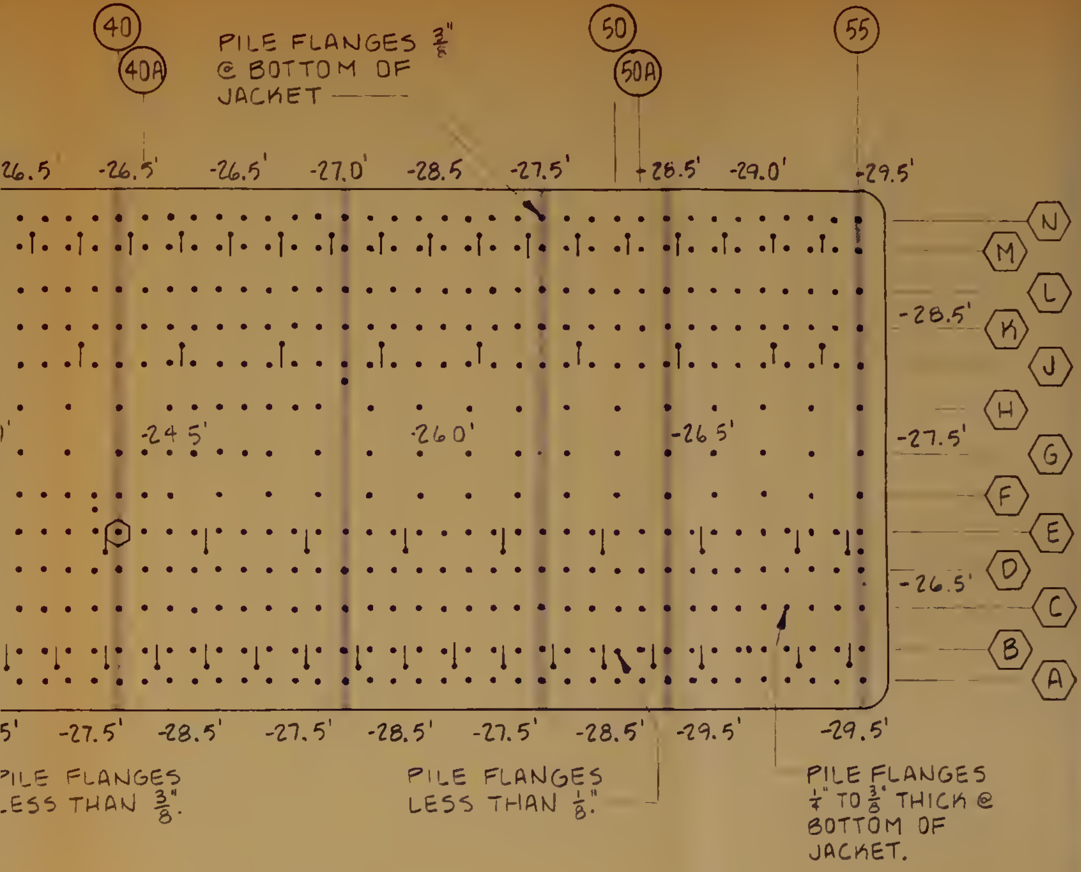
- • VERTICAL PILE LOCATION
- —• BATTER PILE LOCATION (AVG. BATTER $\frac{5}{12}$)
- • • PILES SURVEYED FULL LENGTH
- ⊙ D-METER LOCATION
- -15.5' MUDLINE EL.

PLAN

SCALE · 1" = 30'

EXISTING C

PIER
CHARLESTOW
CHARLES
APRIL



PILE FLANGES $\frac{3}{8}$"
@ BOTTOM OF
JACKET

ILE FLANGES
ESS THAN $\frac{3}{8}$".

PILE FLANGES
LESS THAN $\frac{1}{8}$".

PILE FLANGES
$\frac{1}{4}$" TO $\frac{3}{8}$" THICK @
BOTTOM OF
JACKET.

IG CONDITIONS

PIER #5
STOWN NAVY YARD
RLESTOWN, MA.
APRIL 1987

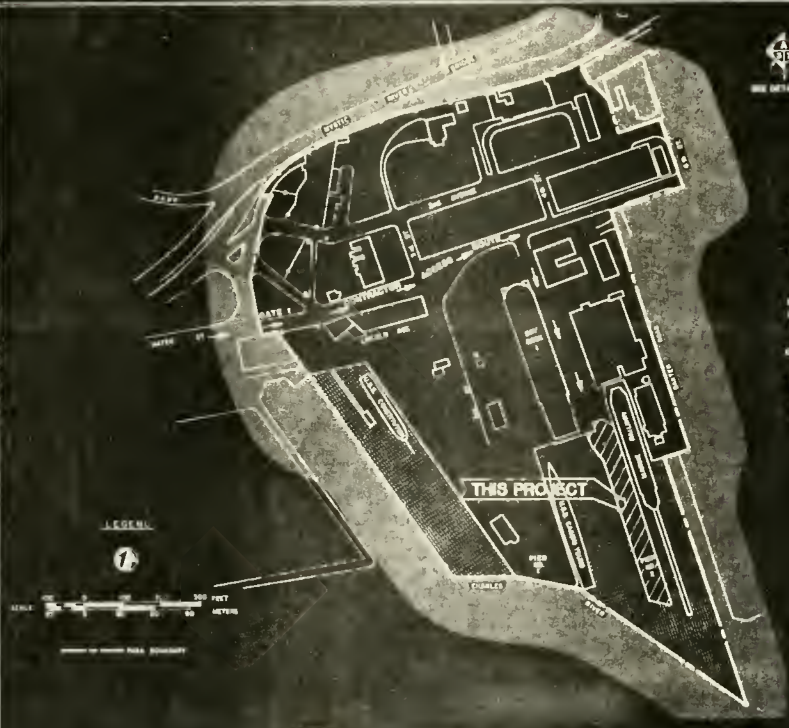
REVISIONS

CHILDS ENGINEERING CORPORATION
BOX 333 MEDFIELD, MASSACHUSETTS 02052 U.S.A.

DRAWN: DWJ
CHECKED: ______
APP'D: ______
DATE: ______

DWG NO. 793-87

SHEET ____ OF ____



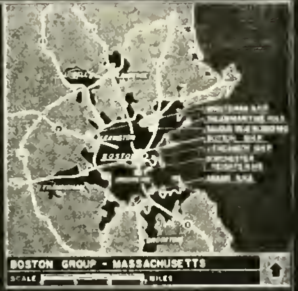
KEY

SECTION IDENTIFICATION LETTER A
SECTION SHOWN ON SHEET 7
SECTION TAKEN FROM SHEET 5

SEE DETAIL
DETAIL IDENTIFICATION LETTER B
DETAIL SHOWN ON SHEET 7
DETAIL TAKEN FROM SHEET 5

ABBREVIATIONS

FS - FAR SIDE
NS - NEAR SIDE
BS - BOTH SIDES
⌀ - DIAMETER
STA - REFERENCE STATION
E - EAST
W - WEST
EL - ELEVATION
MHW - MEAN HIGH WATER
MLW - MEAN LOW WATER
C.S. - SPECIAL CAST IRON WASHER OR LUGS
SQ - SQUARE
GALV - GALVANIZED
℄ - PLATE
PVC - POLYVINYLCHLORIDE
& - AND
TYP - TYPICAL
NIC - NOT IN CONTRACT



BOSTON GROUP - MASSACHUSETTS
SCALE MILES

SHEET INDEX

1 - COVER
2 - SITE PLAN
3 - PILE PLAN - BENT 1 TO 18
4 - BENT ELEVATIONS - BENT 0.5 TO 6.5
5 - BENT ELEVATIONS - BENT 8 TO 9.5
6 - BENT ELEVATIONS - BENT 10 TO 13.5
7 - STRINGER PLAN
8 - JECK PLAN
9 - DETAILS
10 - DETAILS
11 - DETAILS

HSR - 1980 HISTORIC STRUCTURE REPORT HFS DRAWING NO.

CONSTRUCTION DRAWING UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE DENVER SERVICE CENTER	PREPARED CHECKED JUNE 1980 DATE	**RESTORATION OF PIER 2** LOCATED WITHIN PARK **CHARLESTOWN NAVY YARD** NAME OF PARK BOSTON NATIONAL HISTORICAL PARK NORTH ATLANTIC REGION SUFFOLK COUNTY MASS. STATE	DRAWING NO. 487 25013 111 SHEET 1 OF 11

OTHER PROJECTS

REPAIRS TO PIER ONE
National Park Service
Charlestown Naval Shipyard

Childs Engineering inspected above and below water the pier structure. The structure is a solid fill structure with steel sheet piles on the side where the U.S.S. Constitution is moored. On the other side the pier consists of a series of concrete arches supporting the decking. The face of the pier is protected by a timber fender system.

Childs detailed the location of the holes which had been formed by corrosion of the steel sheet piling and designed repairs to the sheet piling together with a corrosion protections system. Where the concrete wasdeteriorated on the other side, pneumatically projected concrete was used to make repairs in the above water portion of the concrete.

USS CONSTITUTION ACCESS PIER

Charlestown, Massachusetts

Inspection services including underwater examination of the existing steel and timber piling and topside investigation of timber support caps and stringers as well as steel support beams were undertaken by Childs Engineering on this project. As the result of the inspection, a condition assessment report was developed detailing existing conditions, calculated capacities, recommendations for rehabilitation and maintenance, and a cost estimate for the rehab work. As the result of the investigation, Childs Engineering prepared contract documents including construction plans and specifications for the rehabilitation of the timber piles, timber bracing, steel piles and bracing, steel superstructure and timber superstructure as well as the replacement of the concrete deck surface. Childs Engineering also provided construction inspection services for topside as well as underwater work.

PIER TWO
National Park Service
Charlestown Navy Yard

As part of an ongoing consulting contract with the National Park Service, Childs Engineering's diving engineers inspected above and below water Pier Two at the Charlestown Navy Yard in Charlestown, Mass. A report including drawings and photographs showing conditions was submitted. Repairs/rebuilding designs were produced with the constraint to "replicate" all pieces replaced. Native timber treated for marine and terrestrial insect/fungus attack as was done when the pier was built in 1905 was used. Special nails which looked like the original spikes for fastening the decking to the joists were specified.

The pier restoration was done a piece at a time due to fiscal restraints. The drawings and specifications were prepared such that they could be re-used with minimal changes as each section was rebuilt.

MORAN TERMINAL WHARF REHABILITATION
Massachusetts Port Authority
Charlestown, Massachusetts

The Massachusetts Port Authority retained the services of Childs Engineering Corporation to assist them in their on-going maintenance and rehabilitation program for one of their many port facilities. The Moran Terminal is an intermodal port facility handling containers from vessels to land and land to vessels. Childs Engineering provided inspection assessment, preliminary and final design services for the rehabilitation of the steel pipe pile supported concrete wharf relieving platform structure and the structural crane rail system. Childs, through our subconsultants, was responsible for the rehabilitation of the existing wharf electric substation including the expansion of the switchgear capacity for the 13.8 kva power system as well as provision of fire protection and portable water for ship service through a series of reduced pressure backflow preventers. During the construction phase of this project, Childs provided resident engineering services.

One of the interesting challenges of this project was the Authority's requirement that the facility remain active during the construction work. During the design phase of the project, Childs developed a phase construction approach which successfully allowed continued operation of container traffic over the wharf during the construction process.

CONCRETE PIER
U.S. Coast Guard
Provincetown, Massachusetts

Childs Engineering Corporation as a sub-consultant to the general architect designed the 1400 foot long concrete pier for the new Coast Guard station in 1976. The pier was as long as it is because of the requirement that no dredging be done in the project. The needed ten feet of water at low tide is out at this distance in that portion of the harbor. Concrete was used, not only for its durability, but also because the high capacity (50 tons) precast/prestressed piles provided for the greatest spacing and thus least interference to littoral drift.

The piles and deck planks were precast-prestressed. The pile caps and wearing surface were cast-in-place concrete.

A protected mooring at the L-head of the pier was created by using a perforated wave barrier along the face of the L and the side of the pier.

HOBSON'S WHARF
Portland, Maine

Childs Engineering Corporation provided design services for the rehabilitation of an existing wharf structure and the addition of two timber piers to be used primarily for the berthing of fishing vessels in Portland Harbor. A fast track approach was used for the design and construction of this project and Childs worked directy with the contractor within an established budget estimate to complete the work within a very tight schedule. At the completion of the preliminary design phase, the contractor provided alternatives to selected materials based on availability and Childs Engineering undertook final design within the constraints of available materials and budget. An unusual feature of this project was the design of a composite building foundation/pier configuration which bridged an old unstable seawall. This composite construction supplied sufficient stability to allow the dredging of berths adjaencent to the new pier.

INTERNATIONAL FERRY TERMINAL
MODIFICATIONS
City of Portland
Portland, Maine

The City of Portland with fiscal support from the State of Maine Department of Transportation engaged Childs Engineering Corporation to assist them in ascertaining the current conditions of the International Ferry Terminal Wharf and development of plans to repair selected elements of the existing timber pier and design a new multipurpose, high capacity facility. Childs Engineering diving engineers undertook an inspection of the existing conditions of the timber pier and associated stone and concrete retaining wall. Based on this inspection, a condition and assessment report was prepared which developed existing capacities and identified areas requiring rehabilitation to accommodate the current needs. Childs was also asked and prepared alternate schematic designs for a new multipurpose transportation pier facility to be constructed within the most severely damaged area of the existing timber pier. Childs prepared preliminary and final designs for the construction of a new concrete decked steel pipe pile supported high capacity pier including a new low maintenance, high energy absorption fender system for use by barge traffic as well as large vessels.

From the selected schematic design, Childs developed contract drawings and technical specifications for the new pier construction as well as backlands improvements including filling, compacting, site grading, and pavement of a selected roadway network.

CASCO BAY ISLAND TRANSIT DISTRICT
City of Portland
Portland, Maine

Childs Engineering, working as a subconsultant, designed the repairs necessary to rehabilitate existing wharfs to allow its use for passenger ferry and car ferry service by the Casco Bay Island Transit District. Work included detailed inspection and repair design, with modifications of a timber wharf, assistance in obtaining permits and licensing as necessary, development of contract documents and assistance during construction.

Design included passenger ramp and a freight ramp for loading passenger ferrys, shore protection, fender systems for car and passenger ferrys, and car ferry transfer area.

The transfer area included design of a pontoon system for the vehicle transfer bridge support, and ferry berthing and alignment dolphin.

UNDERWATER FACILITY INSPECTION AND ASSESSMENT

U.S. Navy

Worldwide

Childs Engineering Corporation has provided underwater inspection services and resulting condition assessment reports to the United States Navy for the last 10 years. Childs Engineering Corporation is one of a handful of firms throughout the United States with the ability to field teams of diving engineers. Childs has performed underwater inspections of timber, steel, concrete, and stone structures throughout this country and the world for the U.S. Navy. Recent projects have included the inspection of three bases in Japan, inspection and subsequent follow-up design for repairs of several facilities at the Norfolk Naval Shipyard, and the inspection of all of the U.S. Naval facilities on Guam, Mariana Islands. As the result of our involvement in the diving inspection and assessment program, Childs has worked closely with the Naval Civil Engineering Laboratories in Port Hueneme, California assisting the development of new techniques for underwater inspection as well as evaluation of new instruments to nondestructively test in water structures.

CAROL R JOHNSON and ASSOCIATES, Inc.

CHARLESTOWN NAVY YARD
RECONSTRUCTION OF PIER 3
OVERVIEW OF FIRM QUALIFICATIONS

As consulting landscape architects for the reconstruction of Pier 3 in the Charlestown Navy Yard, Carol R. Johnson & Associates, Inc. can bring the following assets to the project team.

.More than 25 years of waterfront design experience, including the design of parks and recreational facilities in historic settings.

.An established professional relationship with the Boston Redevelopment Authority, under whose direction the firm prepared a comprehensive study for the restoration of the Boston Common and Public Garden in 1976. CRJ&A is currently coordinating its site designs for the Burroughs Wharf luxury condominium development along the Boston Harbor with the B.R.A.

.A long-standing professional relationship with Childs Engineering Corporation. The two firms collaborated on waterfront restoration projects at Shipyard Quarters, Lechmere Canal Park in East Cambridge, and North End Park in Boston.

.A first-hand familiarity with the project site. CRJ&A were project designers for the recreational boardwalk and pier amenities along Piers 6 and 7 at Shipyard Quarters in the Charlestown Navy Yard. The work was completed in 1982.

.An in-house team of landscape design professionals committed to this project and bringing to it in-depth experience in waterfront recreational facilities design. The CRJ&A project team includes J. William Taylor as Project Director and Donna Repko as Project Manager. Mr. Taylor was project director for design of recreational improvements along Piers 6 and 7 at Shipyard Quarters. Most recently, he served as project director for the reclamation of the Lechmere Canal and design of Lechmere Canal Park in East Cambridge. Ms. Repko has assisted with site design for the new Baker Chocolate Mills condominium development in Dorchester Lower Mills, featuring a riverwalk park along the Neponset River as part of the new Heritage State Park in Dorchester.

Their resumes are attached to this submission, as are text descriptions and photographs of relevant waterfront projects designed by Carol R. Johnson & Associates, Inc.

RECORD OF ADMINISTRATIVE PERFORMANCE

As proven in past projects over the last 29 years, Carol R. Johnson & Associates, Inc. enjoys an outstanding record of sound administrative performance and an ability to coordinate dependably all aspects of design and bid document preparation. This reputation for careful project management focuses on review of design options with the client and coordinating architects and engineers, ongoing cost evaluations, and constant checking and maintenance of project schedules.

All of the firm's projects are subject to rigid cost analysis throughout the design process. This results in successful construction bids, as is evident in the following list of completed projects and their construction bids.

Project	Consultant's Estimate	Construction Cost	Year
Lechmere Canal Park Early Site Work	$1,926,175	$1,903,372	1984
Lechmere Canal Park Final Site Design	$4,113,581	$3,962,248	1986
Harborwalk Phase I	$1,822,000	$1,939,000	1984
Bulfinch Square	$ 85,896	$ 87,123	1985
University Green	$ 252,000	$ 256,000	1985
John F. Kennedy Park	$2,600,000	$2,585,000	1985

STANDARD FORM (SF) 254
Architect-Engineer and Related Services Questionnaire

1. Firm Name / Business Address:
CAROL R. JOHNSON & ASSOCIATES, INC.
1100 Massachusetts Avenue
Cambridge, MA 02138

1a. Submittal is for ☒ Parent Company ☐ Branch Office

2. Year Present Firm Established: 1959; Inc. 1975

3. Date Prepared: March 18, 1988

4. Type of Ownership: Corporation

4a. Minority Owned ☒ yes ☐ no (WBE)
DUNS # 05-599-1608

5. Name of Parent Company, if any:

5a Former Firm Name(s), if any, and Year(s) Established:
Carol R. Johnson, Landscape Architect (1959-1970)
Carol R. Johnson & Associates (1970-1975)

6. Names of not more than Two Principals to Contact: Title / Telephone

1)	Carol R. Johnson, President	(617) 868-6115
2)	Thomas W. Kirvan, Vice President	(617) 868-6115

7. Present Offices: City / State / Telephone / No. Personnel Each Office
1100 Massachusetts Avenue
Cambridge, Massachusetts 02138

7a. Total Personnel 37

8. Personnel by Discipline:
8 Administrative
__ Architects
__ Chemical Engineers
__ Civil Engineers
__ Construction Inspectors
__ Draftsmen
__ Ecologists
__ Economists
__ Electrical Engineers
__ Estimators
__ Geologists
__ Hydrologists
__ Interior Designers
28 Landscape Architects
__ Mechanical Engineers
__ Mining Engineers
__ Oceanographers
1 Planners: Urban/Regional
__ Sanitary Engineers
__ Soils Engineers
__ Specification Writers
__ Structural Engineers
__ Surveyors
__ Transportation Engineers

9. Summary of Professional Services Fees Received: (Insert Index number)

Last 5 Years (most recent year first)

	19 87	19 86	19 85	19 84	19 83
Direct Federal contract work, including overseas	1	1	1	1	1
All other domestic work	5	5	5	5	4
All other foreign work*	1	1	1	1	1

*Firms interested in foreign work, but without such experience, check here: ☐

Ranges of Professional Services Fees

INDEX	
1.	Less than $100,000
2	$100,000 to $250,000
3.	$250,000 to $500,000
4.	$500,000 to $1 million
5.	$1 million to $2 million
6	$2 million to $5 million
7.	$5 million to $10 million
8.	$10 million or greater

Standard Form 254 July 1975
Prescribed By GSA Fed Proc Reg (41 CFR) 1-16 803

Experience Profile Code Numbers
for use with questions 10 and 11

001	Acoustics; Noise Abatement
002	Aerial Photogrammetry
003	Agricultural Development; Grain Storage; Farm Mechanization
004	Air Pollution Control
005	Airports; Navaids; Airport Lighting; Aircraft Fueling
006	Airports; Terminals & Hangars; Freight Handling
007	Arctic Facilities
008	Auditoriums & Theatres
009	Automation; Controls; Instrumentation
010	Barracks; Dormitories
011	Bridges
012	Cemeteries *(Planning & Relocation)*
013	Chemical Processing & Storage
014	Churches; Chapels
015	Codes; Standards; Ordinances
016	Cold Storage; Refrigeration; Fast Freeze
017	Commercial Buildings *(low rise)*; Shopping Centers
018	Communications Systems; TV; Microwave
019	Computer Facilities; Computer Service
020	Conservation and Resource Management
021	Construction Management
022	Corrosion Control; Cathodic Protection; Electrolysis
023	Cost Estimating
024	Dams *(Concrete; Arch)*
025	Dams *(Earth; Rock)*; Dikes; Levees
026	Desalinization *(Process & Facilities)*
027	Dining Halls; Clubs; Restaurants
028	Ecological & Archeological Investigations
029	Educational Facilities; Classrooms
030	Electronics
031	Elevators; Escalators; People-Movers
032	Energy Conservation; New Energy Sources
033	Environmental Impact Studies, Assessments or Statements
034	Fallout Shelters; Blast-Resistant Design
035	Field Houses; Gyms; Stadiums
036	Fire Protection
037	Fisheries; Fish Ladders
038	Forestry & Forest Products
039	Garages; Vehicle Maintenance Facilities; Parking Decks
040	Gas Systems *(Propane; Natural, Etc.)*
041	Graphic Design
042	Harbors; Jetties; Piers; Ship Terminal Facilities
043	Heating; Ventilating; Air Conditioning
044	Health Systems Planning
045	Highrise; Air Rights-Type Buildings
046	Highways; Streets; Airfield Paving; Parking Lots
047	Historical Preservation
048	Hospitals & Medical Facilities
049	Hotels; Motels
050	Housing *(Residential, Multi-Family; Apartments; Condominiums)*
051	Hydraulics & Pneumatics
052	Industrial Buildings; Manufacturing Plants
053	Industrial Processes; Quality Control
054	Industrial Waste Treatment
055	Interior Design; Space Planning
056	Irrigation; Drainage
057	Judicial and Courtroom Facilities
058	Laboratories; Medical Research Facilities
059	Landscape Architecture
060	Libraries; Museums; Galleries
061	Lighting *(Interiors; Display; Theatre, Etc.)*
062	Lighting *(Exteriors; Streets; Memorials; Athletic Fields, Etc.)*
063	Materials Handling Systems; Conveyors; Sorters
064	Metallurgy
065	Microclimatology; Tropical Engineering
066	Military Design Standards
067	Mining & Mineralogy
068	Missile Facilities *(Silos; Fuels; Transport)*
069	Modular Systems Design; Pre-Fabricated Structures or Components
070	Naval Architecture; Off-Shore Platforms
071	Nuclear Facilities; Nuclear Shielding
072	Office Buildings; Industrial Parks
073	Oceanographic Engineering
074	Ordnance; Munitions; Special Weapons
075	Petroleum Exploration; Refining
076	Petroleum and Fuel *(Storage and Distribution)*
077	Pipelines *(Cross-Country — Liquid & Gas)*
078	Planning *(Community, Regional, Areawide and State)*
079	Planning *(Site, Installation, and Project)*
080	Plumbing & Piping Design
081	Pneumatic Structures; Air-Support Buildings
082	Postal Facilities
083	Power Generation, Transmission, Distribution
084	Prisons & Correctional Facilities
085	Product, Machine & Equipment Design
086	Radar; Sonar; Radio & Radar Telescopes
087	Railroad; Rapid Transit
088	Recreation Facilities *(Parks, Marinas, Etc.)*
089	Rehabilitation *(Buildings; Structures; Facilities)*
090	Resource Recovery; Recycling
091	Radio Frequency Systems & Shieldings
092	Rivers; Canals; Waterways; Flood Control
093	Safety Engineering; Accident Studies; OSHA Studies
094	Security Systems; Intruder & Smoke Detection
095	Seismic Designs & Studies
096	Sewage Collection, Treatment and Disposal
097	Soils & Geologic Studies; Foundations
098	Solar Energy Utilization
099	Solid Wastes; Incineration; Land Fill
100	Special Environments; Clean Rooms, Etc.
101	Structural Design; Special Structures
102	Surveying; Platting; Mapping; Flood Plain Studies
103	Swimming Pools
104	Storm Water Handling & Facilities
105	Telephone Systems *(Rural; Mobile; Intercom, Etc.)*
106	Testing & Inspection Services
107	Traffic & Transportation Engineering
108	Towers *(Self-Supporting & Guyed Systems)*
109	Tunnels & Subways
110	Urban Renewal; Community Development
111	Utilities *(Gas & Steam)*
112	Value Analysis; Life-Cycle Costing
113	Warehouses & Depots
114	Water Resources; Hydrology; Ground Water
115	Water Supply, Treatment and Distribution
116	Wind Tunnels; Research/Testing Facilities Design
117	Zoning; Land Use Studies
201	Approvals/Permits
202	
203	
204	
205	

10. Profile of Firm's Project Experience, Last 5 Years

Profile Code	Number of Projects	Total Gross Fees (in thousands)	Profile Code	Number of Projects	Total Gross Fees (in thousands)	Profile Code	Number of Projects	Total Gross Fees (in thousands)
1) 010	10	376	11) 042	12	717	21) 072	38	4,032
2) 011	2	159	12) 046	59	3,016	22) 079	71	5,624
3) 012	2	14	13) 047	15	992	23) 084	9	253
4) 014	2	52	14) 048	14	212	24) 087	13	621
5) 015	13	2,791	15) 050	70	1,535	25) 088	41	3,654
6) 017	14	3,409	16) 052	15	897	26) 089	63	4,859
7) 029	58	1,160	17) 056	48	4,238	27) 096	16	226
8) 033	14	2,084	18) 058	5	133	28) 097	17	2,659
9) 035	6	132	19) 060	10	285	29) 110	37	4,918
10) 039	9	368	20) 062	43	6,511	30) 201	23	2,969

11. Project Examples, Last 5 Years

Profile Code	"P", "C", "JV", or "IE"	Project Name and Location	Owner Name and Address	Cost of Work (in thousands)	Completion Date (Actual or Estimated)
010	C	1 Southeastern Massachusetts University Student Residences Dartmouth, Massachusetts	Southeastern Massachusetts University Dartmouth, Massachusetts	$ 1,200	1988
011	C	2 I/84-I/91 Final Design 1/84 Platform Hartford, Connecticut	Connecticut Dept. of Transportation Wethersfield, Connecticut	$18,000 2,500	1992
012	P	3 Spring Grove Cemetery Master Plan Andover, Massachusetts	Kenneth Mahony, Town Manager Andover, Massachusetts	$ 45	1985
014	P	4 Church of Jesus Christ of Latter-Day Saints Belmont, Massachusetts	Church of Jesus Christ of Latter-Day Saints Belmont, Massachusetts	MP - $4,000 Ph1- 933	1985
015	C	5 George's Island Master Plan Boston Harbor Boston, Massachusetts	The Metropolitan District Commission Boston, MA	N/A	1988
017	C	6 Martha's Vineyard National Bank Tisbury, Massachusetts	MVY Realty Trust Boston, Massachusetts	$ 975	1989
029	C	7 Somerville Comprehensive High School Somerville, Massachusetts	City of Somerville Somerville, Massachusetts	$ 2,000	1988

033	C	8 Ocean Spray Cranberries, Inc. Corporate Headquarters Lakeville/Middleboro, Massachusetts	Ocean Spray Cranberries, Inc. Plymouth, Massachusetts	$ 3,600	1988
035	C	9 Fitchburg State College Athletic Facility Fitchburg, Massachusetts	Fitchburg State College Fitchburg, Massachusetts	$ 1,600	1989
039	C	10 University of Massachusetts Medical Center Parking Garage Worcester, Massachusetts	The University of Massachusetts Medical Center Worcester, Massachusetts	$ 1,100	1988
042	C	11 Shipyard Quarters Condominiums Charlestown Navy Yard Charlestown, MA	Raymond St. John Development Company Charlestown, MA	$ 600	1988
046	P	12 Bromley-Heath Housing Site Modernization Jamaica Plain, MA	Bromley-Heath Tenant Management Corp. Boston Housing Authority Boston, Massachusetts	$ 7,000	1989
047	P	13 The Vale Master Plan Waltham, Massachusetts	Society for the Preservation of New England Antiquities Waltham, Massachusetts	Ph 1 - 4: $ 1,978	1987
048	P	14 University Hospital Boston, Massachusetts	University Hospital Boston, Massachusetts	$ 120 .	1988
050	P	15 Arluwade (The Bryer Estate) Hampton, New Hampshire	John Merchant (for the Bryer Estate) JMP Properties Salem, New Hampshire	$ 1,000	1989
052	C	16 Black & Decker Manufacturing Company Headquarters Towson, Maryland	Black & Decker Manufacturing Company Towson, Maryland	$ 2,257	1986
056	P	17 John F. Kennedy Park Cambridge, Massachusetts	The Metropolitan District Commission Boston, Massachusetts	$ 2,500	1987
058	C	18 Clinical Area Improvements V.A. Medical Center Togus, Maine	The Veterans Administration Washington, D.C.	$27,000	1990
060	C	19 Bulfinch Square/Cambridge Multicultural Arts Center	Graham Gund, Architect/Developer Cambridge, Massachusetts	$ 668	1986

062	C	20 East Cambridge Roadway Improvements East Cambridge, Massachusetts	Community Development Department Cambridge, Massachusetts	$2,725	1989
072	P	21 Digital Equipment Corporation Spit Brook Facility Master Plan Spit Brook (Nashua), New Hampshire	Digital Equipment Corporation Maynard, Massachusetts	Ph. 1-3 $6,800	1988
079	C	22 I-84 Platform Design Hartford, Connecticut	Connecticut Dept. of Transporation Wethersfield, Connecticut	$2,500	1992
084	C	23 MCI Framingham Framingham, Massachusetts	Commonwealth of Massachusetts Department of Corrections Boston, Massachusetts	$2,220	1990
087	C	24 Old Colony Rail Line Rehabilitation The South Shore Boston, Massachusetts	Massachusetts Bay Transportation Authority Boston, MA	$15,000	1991
088	P	25 Newton Country Day School of the Sacred Heart Athletic Fields Newton, Massachusetts	Newton Country Day School Newton, Massachusetts	$1,000	1989
089	C	26 The Massachusetts State House Site Modernization Program Boston, Massachusetts	Commonwealth of Massachusetts Division of Capital Planning & Operations, Boston, Massachusetts	$1,500	1989
096	C	27 Woodstock, New York Wastewater Treatment Facility	Town of Woodstock, New York	$ 270	1983
097	P	28 Flat Rock Sanctuary Fitchburg, Massachusetts	The Massachusetts Audubon Society Lincoln, Massachusetts	$ 180	1990
110	P	29 Eastman Plaza Rochester, New York	Cultural District Commission Rochester, New York	$ 300	1989
201	P	30 Lechmere Canal Park East Cambridge, Massachusetts	Community Development Department Cambridge, Massachusetts	$6,200	1988

12. The foregoing is a statement of facts

Signature: Typed Name and Title: Carol R. Johnson, President

Date: March 18, 1988

WILLIAM TAYLOR
Associate Vice President

Professional Experience

William Taylor is an Associate Vice President at Carol R. Johnson & Associates, Inc. Between 1974 and 1979 Mr. Taylor taught at the University of Illinois in a joint appointment with the Department of Landscape Architecture and the Housing Research and Development Program. While at the University, he managed research contracts involving resident participation in the design for neighborhood rehabilitation and public housing site improvements, developed courses in park and playground design, citizen participation in design, and site planning for multi-family and elderly housing. He is the author of two reports on design criteria for the elderly and one article on park design and neighborhood renovation. Mr. Taylor worked as a landscape designer for Carol R. Johnson & Associates, Inc. between 1971 and 1974, and prior to 1971 he worked as a landscape architect in Pennsylvania and North Carolina for four years. He rejoined Carol R. Johnson & Associates, Inc. in 1979.

Mr. Taylor is currently overseeing early site preparation design for the new Emerson College campus in Lawrence, MA. He is also currently serving as project director for riverfront parks and urban design work related to the Hartford I-91/I-84 roadways project. He has been designated project director for CRJ&A's involvement in Boston's Central Artery and Third Harbor Tunnel.

His work at Carol R. Johnson & Associates has included project management for a number of other urban site rehabilitation projects in the Boston area. He served as project coordinator for site development of the Lechmere Canal and Square project in East Cambridge, MA, a ten-acre mixed-use development of housing, open space and commercial use surrounding a restored 19th century industrial canal. As project administrator, he directed landscape design and development, coordinated the work of associated development with park design, and worked closely with city administrators and the East Cambridge Neighborhood Task Force. He also served as project director for landscape improvements to Bulfinch Square, an historic East Cambridge, MA courthouse square; and for site planning and improvements for Somerville Comprehensive High School, City Hall and Library, Somerville, MA.

	He has directed the Shipyard Quarters Marina and public open space projects at the former Charlestown Navy Yard site in Boston, MA; and the East Cambridge Roadway Improvements project in East Cambridge, MA.
Education	Harvard University, Cambridge, Massachusetts, Master in Landscape Architecture, 1974 North Carolina State University, Raleigh, North Carolina, Bachelor of Landscape Architecture, 1968
Professional Registration	Registered Landscape Architect in Massachusetts

DONNA A. REPKO
Landscape Architect

Professional Experience

Donna Repko joined the professional staff of Carol R. Johnson & Associates, Inc. as a Landscape Architect in the summer of 1987. For two years prior to this time, Ms. Repko was a landscape designer with an internationally recognized architectural firm in Cambridge, MA. While there she assisted with site analysis, design, and development for a variety of corporate, institutional, and commercial projects, among them the CIGNA Corporation in Bloomfield, CT; The Egyptian Museum, Cairo, Egypt; Roc Harbor, North Bergen, NJ; Florida International University Master Plan, Miami, FL; and New England Center, Durham, NH. Additional professional experience includes a position with a Boston, MA architectural firm; a position as supervisor of the Graphics Unit within the Office of Planning for Broward County, Fort Lauderdale, FL; and positions with firms in Fort Lauderdale, FL, Tucson, AZ, and Waterbury, CT.

At Carol R. Johnson & Associates, Inc. Ms. Repko is a key team member responsible for design studies, construction documents and specifications, site supervision, and client coordination. She is currently managing three projects on Cape Cod: the Tarr Residence in Woods Hole, Windchime Point in Mashpee, and Ryders Hill in Chatham. All three projects have been under her supervision from preliminary design and will remain so through construction. Design documents and field supervision are underway for the Tarr Residence, with construction of a tennis court, swimming pool, new garage and gardens to take place during the spring of 1989. Design documents and construction supervision are also underway for planting of the first 40 units of Windchime Point, a 160-unit condominium development. For Ryders Hill, a 60-unit condominium development, Ms. Repko has prepared planting and erosion control plans.

Ms. Repko has also prepared design documents for Baker Chocolate Mills in Dorchester, MA, and Crossley Hall on the campus of the Northfield Mount Hermon School in Northfield, MA.

Education	University of Arizona, Tucson, AZ, Bachelor of Landscape Architecture, 1983 University of Connecticut, Storrs, CT, Studies in Environmental Design, 1977
Related Academic Experience	Three-month study of historical preservation, Mexico City, Mexico, 1981

AFFIRMATIVE ACTION POLICY STATEMENT

It is the policy and practice of Carol R. Johnson & Associates, Inc. to assure that no person will be discriminated against or be denied the benefits of any activity, program, or employment process receiving public funds, in whole or in part, in the areas of recruiting, advertising, hiring, upgrading, promoting, transferring, demoting, lay-offs, terminations, rehiring, employment and/or rates of pay and other compensations.

It is also the policy and practice of the firm not to discriminate against any person on the grounds of race, color, creed, religious belief, national origin, ancestry, marital status, physical disability or blindness, criminal record, mental disorder, age and/or sex except where sex is a bona fide occupational qualification.

This policy and practice apply to all persons, particularly those that are members of the protected classes identified as being Blacks, Hispanics, Asian Americans, American Indians, Women, and the Handicapped.

CAROL R. JOHNSON & ASSOCIATES, INC.
Landscape Architects/Site Planners

As of November 2, 1988

	Minority Males		Minority Females		Majority Males		Majority Females		Total	
	Consultant	Sub-Consultant	Consultant	Sub-Consultant	Consultant	Sub-Consultant	Consultant	Sub-Consultant	Consultant	Sub-Consult
Managerial						5		1		6
Professional				1		5		7		13
Technical				1		3		7		11
Clerical						1		6		7
Total				2		14		21		37

Attachment 1:
Personnel by
Classification

SHIPYARD QUARTERS MARINA AND PROMENADE
Charlestown, Massachusetts

Shipyard Quarters Marina, the waterfront parcels and piers in the former Charlestown Navy Yard, is planned as a 550 boat marina in Boston's inner harbor. This private development by Immobiliare New England incorporates public access with harborside amenities. Carol R. Johnson & Associates, Inc. has provided landscape development plans for permanent and temporary development of the waterfront promenade and piers, the first phase of which is complete.

Included in Phase I is the development of Pier 6, extending 650 feet into Boston Harbor, and the public boardwalk promenade which stretches 800 feet along the waterfront. Pier 6 gives access to 150 marina slips through gates, provides controlled auto access and parking. Its public promenade, designed by Carol R. Johnson & Associates, with viewing platforms, seating and sun canopies, allows a panoramic view of the Boston Harbor and skyline. Railings, decking, planting, night lighting and marine security gates were designed by Carol R. Johnson & Associates.

Phase 2 is the development of Pier 5 as a seven court tennis club with clubhouse facilities and controlled access. Planters and benches enhance the wooden deck areas where players may relax and enjoy the scenic views.

Carol R. Johnson & Associates has now been retained by the Boston architects Notter, Finegold & Alexander to design surface improvements along Pier 7 at Shipyard Quarters, the site of new luxury condominiums under construction. Site development along Pier 7 includes new planting, site furniture, and design of special features such as paving, railings, dodging, architectural trellises and vine planting.

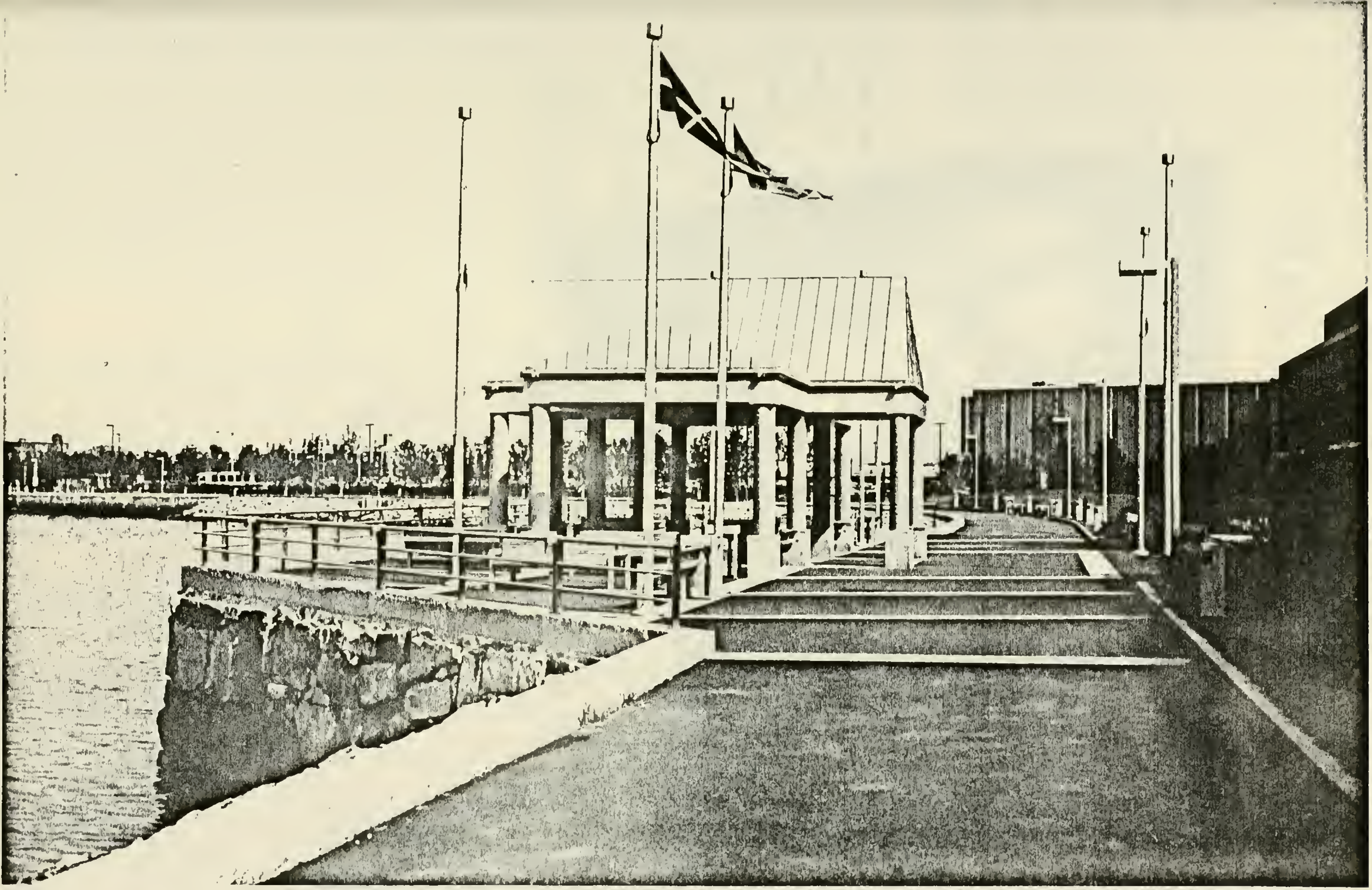
OPUS

6A

THE HARBORWALK
Logan International Airport
East Boston, Massachusetts

The Harborwalk at Bird Island Flats was designed as an amenity which will benefit the East Boston-Jeffries Point residential neighborhood, the Bird Island Flats industrial development by Macomber Construction Company, and the commercial and industrial activity which is part of the operation of Logan International Airport. The final walkway design as masterplanned by Carol R. Johnson & Associates, Inc. is intended to provide a 20-foot wide path for pedestrians and emergency vehicles with railings, seats, lights, trash receptacles, and other necessary site furniture, as well as activity nodes which will respond to the special features of the buildings in the adjacent development, the proposed ferry docking area and fire boat location, and the natural surroundings, views and vistas of the City and the airport.

Carol R. Johnson & Associates, as direct consultant to the Massachusetts Port Authority, prepared the master plan for the Bird Island Flats Harborwalk. In developing the Master Plan, the firm met with representatives of the Bird Island Flats Design Advisory Review Committee to determine neighborhood and user preferences for recreational development. CRJ&A prepared evaluations of existing data and environmental constraints, as well as preliminary and final schematic plans, sections, character sketches, phasing plans, and cost estimates. It also established strategies for water's edge construction, lighting, and other utilities. Phases I and II of the master plan, representing the first two-thirds of the Walkway, are complete and were dedicated in the spring of 1986.

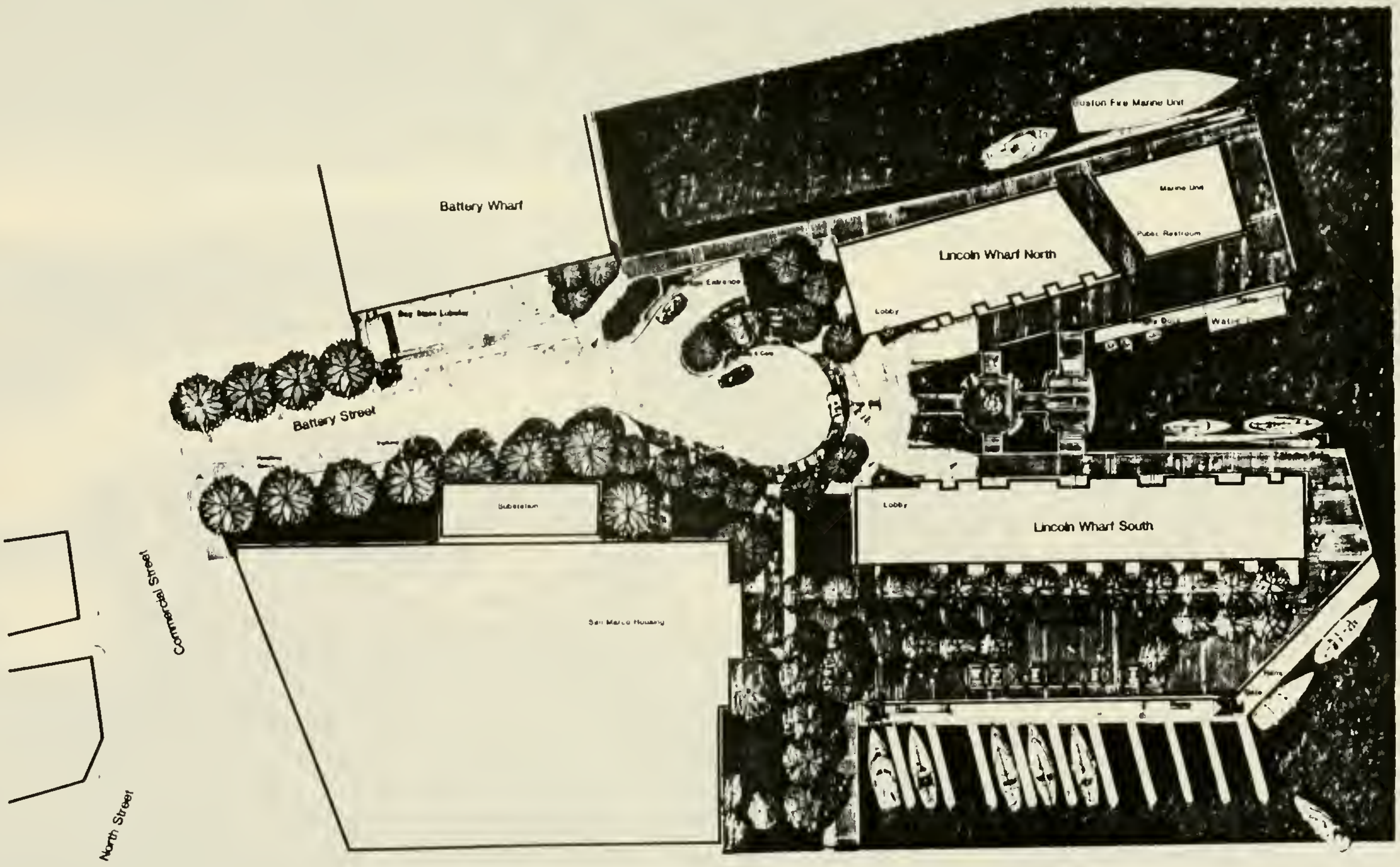


BURROUGHS WHARF
Boston, MA

Carol R. Johnson & Associates, Inc. was retained by Notter, Finegold & Alexander, Inc., project architects, for a new luxury condominium development on Burroughs Wharf along the Boston waterfront, to provide landscape design and public space design for the development. Within its general scope of responsibility were site plan design, including layout of parking areas, design of controlled access gates for marina facilities, design of public pedestrian space for passive recreation, and design of outdoor furnishings and planting.

Specifically, CRJ&A provided design and detailing of all surface paving systems, site grading, layout and surface materials description, design of all traffic control and pedestrian safety features (guardrailing, handrailing, bollards and curbing), design and detailing of a display fountain, of site lighting components, of an irrigation distribution system, of sign structures, and of site structures, including marina access gates and pier head pavilions. For these respective areas of involvement, CRJ&A provided complete design services, from schematic design through construction documents, contract specifications and construction administration.

Because of the site's prominent waterfront location, matters of public access and use dominated the site decisions and guided the firm in its design of all site elements.



Lincoln Wharf

Boston, Massachusetts

LINCOLN WHARF ASSOCIATES

Architects and Planners

NOTTER FINEGOLD + ALEXANDER INC

Structural Engineers

BOSTON BUILDING CONSULTANTS

Mechanical Electrical Engineers

THOMPSON CONSULTANTS INC

Landscape Architects

CAROL R. JOHNSON & ASSOCIATES INC

Geotechnical Engineers

HALEY & ALDRICH INC

Date January 2 1987
Scale 1"=20'-0"
Drawn JWT
Checked

Revisions

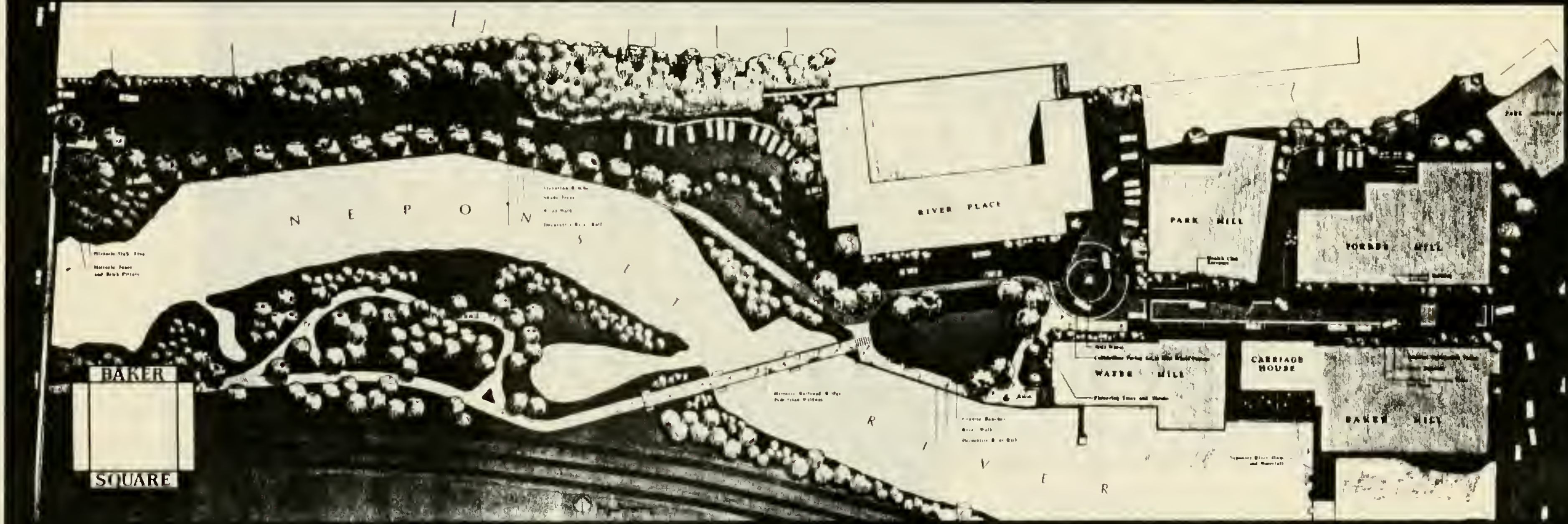
Illustrative Site Plan

BAKER CHOCOLATE MILLS
Dorchester Lower Mills, Massachusetts

Carol R. Johnson & Associates, Inc. is providing design services to Related Companies Northeast, designated developer of the historic Baker Chocolate Mills site in Dorchester Lower Mills, Massachusetts. Several mill buildings are being renovated for housing and a new building constructed for housing and parking.

The 7-acre site is also to be part of a Heritage State Park, providing interpretation of the history of the site for school groups and other park visitors. One area of the park has been designed to accommodate occasional special events such as chocolate festivals and concerts. A riverwalk promenade will offer views of the river and views of the dam originally built to provide power to the mills.

Estimated site construction costs are $1.6 million.


BAKER SQUARE
NEPONSET RIVER
Historic Oak Tree
Historic Fence and Brick Pillars
Victorian Benches
Shade Trees
River Walk
Decorative River Rail
RIVER PLACE
PARK MILL
Health Club Entrance
FORBES MILL
PARK
Historic Railroad Bridge Pedestrian Walkway
Granite Benches
River Walk
Decorative River Rail
Cafe
WATER MILL
Flowering Trees and Shrubs
CARRIAGE HOUSE
BAKER MILL
Neponset River Dam and Waterfall

LECHMERE CANAL PARK
East Cambridge, Massachusetts

Lechmere Canal Park is part of an overall revitalization effort to reclaim underused land and to transform Lechmere Square in East Cambridge into a functionally diverse and active urban center.

As prime consultant to the City of Cambridge for the 7.5 acre public park, Carol R. Johnson & Associates is responsible for landscape design, construction documents, bid administration and site supervision. As landscape architects, the firm is also responsible for site planning and coordination of landscape design with public and private development surrounding the park. Working with the developers, CRJ&A prepared site guidelines and is coordinating all site design efforts as part of planned office and residential developments.

The historical importance of the Lechmere Canal area as a center for 19th century industry has been recalled through incorporation of original details, imagery and artifacts into a contemporary design theme. The new park creates a colorful and lively focus supporting new places to shop, live, and work, as well as a new association between the City of Cambridge and its riverfront.

The park was dedicated in the fall of 1986. The project has received a 1988 Merit Award from the Boston Chapter of the American Society of Landscape Architects and a 1988 Award for Excellence from the Land and Water Conservation Fund of the National Park Service.

Lechmere Canal Park, East Cambridge, MA

MYSTIC RIVER RESERVATION
Medford and Somerville, Massachusetts

The Mystic River Reservation is one of the most important land reclamation and improvement projects in the metropolitan Boston area. This 180-acre park extends the impact of the existing Mystic Lakes Reservation by providing a linear spine of water, vegetation, and recreational space which unifies the overall region and structures neighborhood identity. The park buffers adjacent industrial sprawl and frames pleasing views of distant industrial sites and residential development.

As prime consultant to the Metropolitan District Commission, Carol R. Johnson & Associates, Inc. provided professional services involving soils analysis and evaluation, land reclamation and improvement strategies, cost analysis, landscape design, working drawings and site construction observation.

The park incorporates a network of pathways on a rolling terrain or along the waterfront. Pedestrian pathways and bikeways are planned to connect the Wellington MBTA station with downtown Medford Square. New pedestrian bridges were designed over existing waterways, and areas under automobile and rapid transit bridges were landscaped.

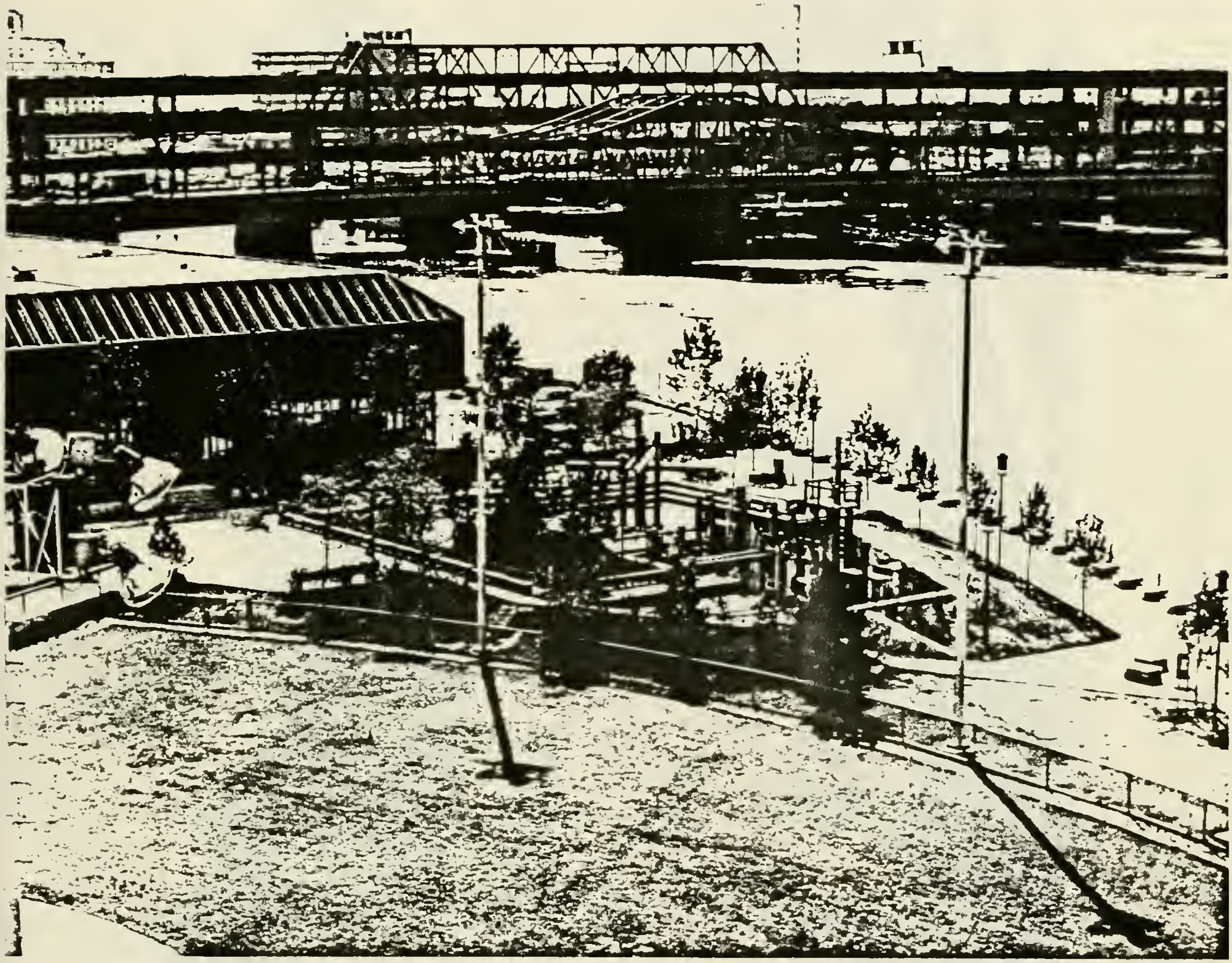
The final design of this comprehensive park project lends a strong sense of visual cohesiveness to the entire Mystic Parkway area. The park today is a major achievement in the revegetation and reuse of industrial spoils areas. The project was awarded an Honor Award by the American Society of Landscape Architects in 1982. In 1986, it received a state-wide Governor's Design Award, one of only 12 projects throughout the Commonwealth to be so recognized.

Mystic River Reservation, Medford/Somerville, MA

NORTH END PARK
Boston, Massachusetts

North End Park has been developed as a neighborhood focus within Boston's waterfront improvement area. The park is comprised of three separate development parcels which are interrelated elements of an overall master plan. As consultant to the Public Facilities Department, Carol R. Johnson & Associates prepared the sketch master plans which established a framework for the total development program. Preliminary planning meetings were held with local residents to establish user goals and preferences.

The final design for the initial development parcel emphasized a strong orientation to the water's edge through the use of granite seawalls and waterfront promenades which give views of the masts of the USS Constitution, Bunker Hill Monument, and the historic North End. Additional design elements include a lighted ballfield, a children's play area, and a variety of sitting areas. Throughout the park a conscious effort has been made to use materials and details which are sympathetic to the historic and nautical character of the area. The design of the waterfront light by Carol R. Johnson & Associates has been used on other waterfront projects in Boston.



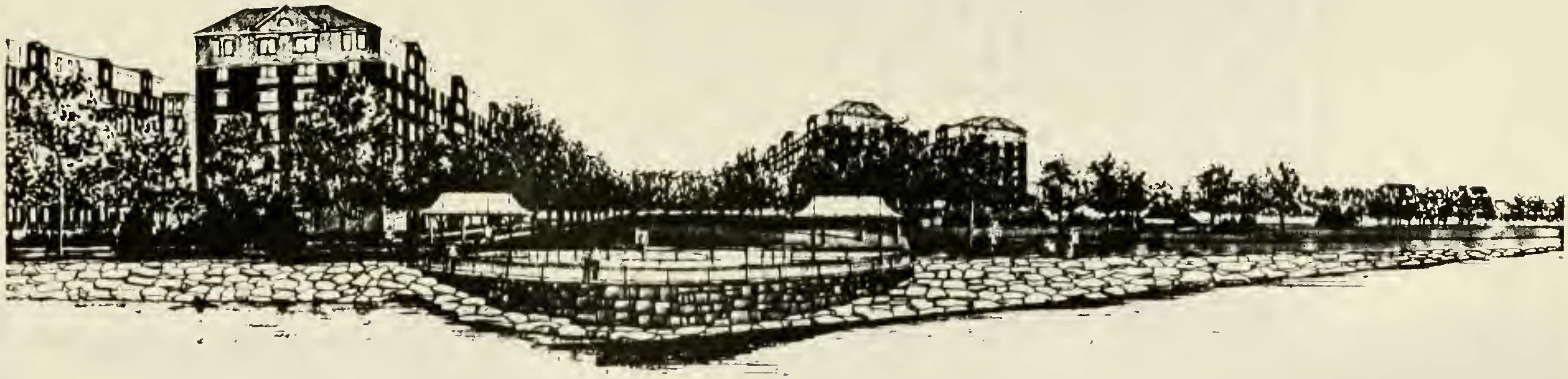
North End Park, Boston, MA

OLD HARBOR PARK
Boston, MA

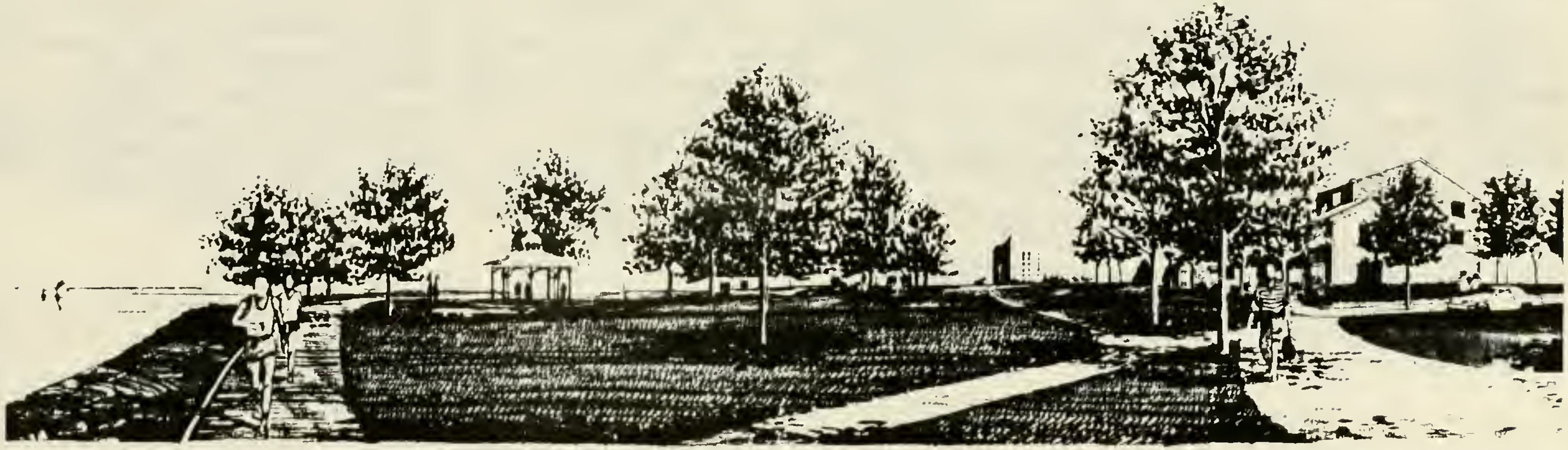
Integral to the success of the revitalization of the Columbia Point low income housing project and of the entire Columbia Point peninsula is the creation of a waterfront park between the John F. Kennedy Memorial Library and the southern tip of Carson's Beach. This section of waterfront constitutes a one mile missing link in the Metropolitan District Commission's several miles of reservation on Dorchester Bay between Castle Island and the University of Massachusetts campus at Columbia Point.

Carol R. Johnson & Associates, Inc. was retained to study the possibilities for this area and to formulate a Master Plan for the entire one mile of waterfront. The park has been designed to be primarily a passive recreation space where water-related activities such as picnicking, sitting, viewing, fishing, walking, jogging and bicycling can occur. Along this linear park, major spaces are located where larger groups can gather or where active recreation facilities can be accommodated.

The firm is also providing the final design services for the one-half mile portion of the waterfront park abutting Harbor Point, the revitalized Columbia Point housing project. This portion of the park is solely for passive recreation, its major feature being a viewing terrace which thrusts out over the water and provides direct views of the Boston Harbor Islands. At other points along the pathway which runs the length of the park, connecting it to the entire park system, are located granite steps down to the water's edge, a viewing pavilion, two pocket beaches, picnic and barbeque facilities, benches, lighting, planting, and interpretive features describing the historical, social, natural, and geographic aspects of the park. The park is scheduled to be complete in 1992.



WATERFRONT PARK PERSPECTIVE OF VIEWING TERRACE

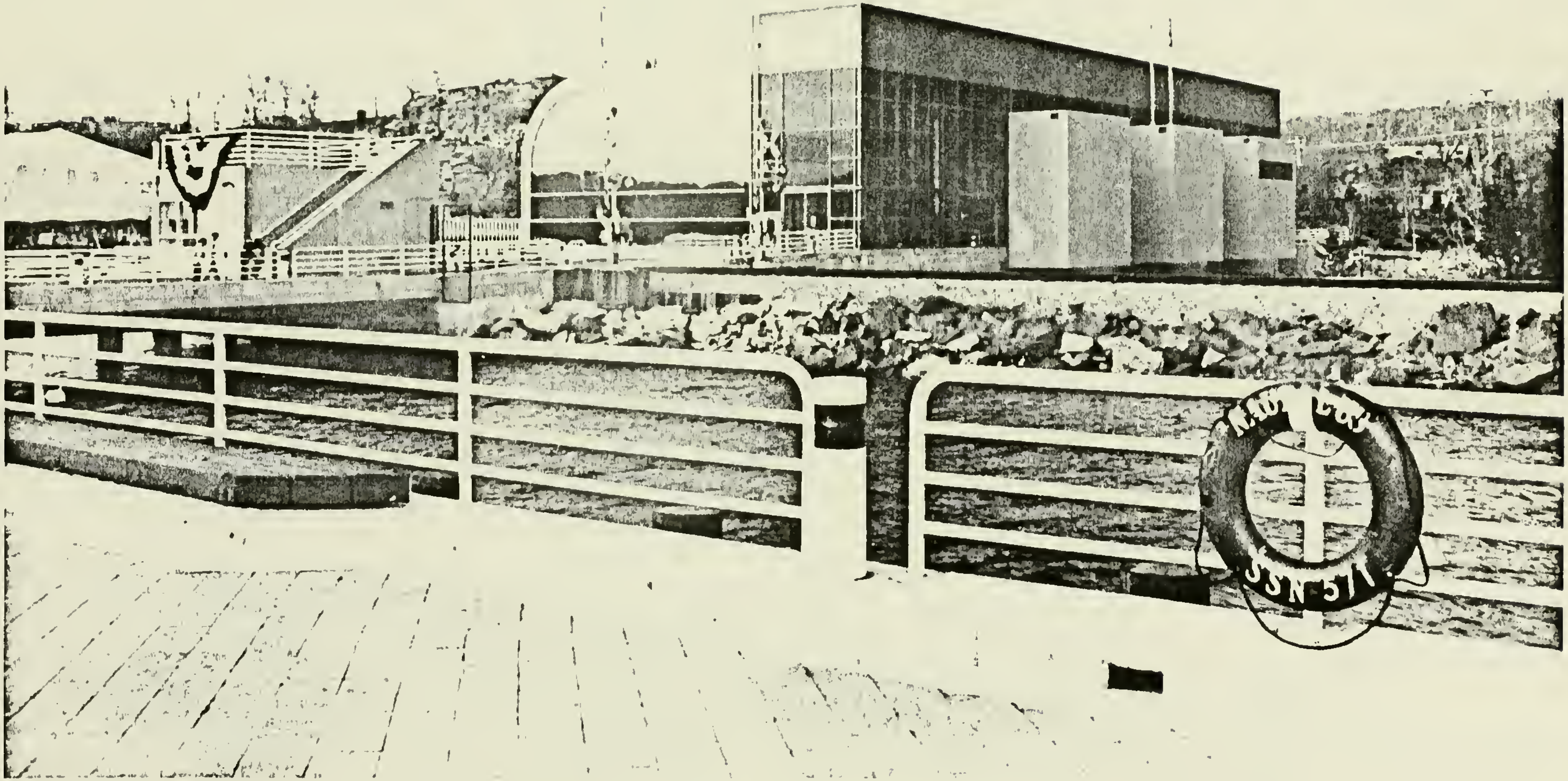


WATERFRONT PARK PERSPECTIVE OF PICNIC AREA

Old Harbor Park, South Boston, MA

USS NAUTILUS MEMORIAL AND MUSEUM
New London, Connecticut

Carol R. Johnson & Associates, Inc. provided landscape design services as part of the development of the new USS Nautilus Memorial and Museum in New London, CT. Funded by a grant from the State of Connecticut and the Department of the Navy, the project included construction of the museum building which houses memorabilia from the existing Submarine Force Museum in New London, and the Submarine Force library collection. The museum chronicles the history of the U.S. Submarine Force and focuses on the USS Nautilus, America's first nuclear powered submarine. As part of site design work for the project, CRJ&A studied edge conditions, designed parking layout, studied access and circulation alternatives and provided cost estimates for unusual or unique site improvements. Specific site development work involved analysis of pier access, views to the boat, environmental concerns, and traffic flow to the museum and to the Nautilus. Included in CRJ&A's work was the design of all surface improvements and edges of the "T" shaped mooring pier. The firm also assessed the scenic value and visual potential of the site, its historical implications, and wetland significance; it evaluated adjoining residential sites and their links to the main site; and it studied edge conditions of the adjoining cove and developed methods for obtaining adequate security without visually oppressive fencing.



USS Nautilus Memorial and Museum, New London, CT

McCARRON, HUFNAGLE & BENT, Inc.

Since its establishment in 1959, McCarron, Hufnagle & Bent, Inc. has been engaged in the practice of electrical consulting engineering. We are a forward-looking professional engineering design firm that, as successor to former corporations going back to 1935, brings an exceptional depth of experience and a high level of expertise to its electrical design of computer and communications facilities, commercial buildings, hospitals and health care facilities, and emergency power installations.

The management of MHB rests with John J. Hufnagle, and Charles H. Bent, practicing registered professional engineers. With a highly skilled and experienced staff of engineers, designers, and drafting personnel, MHB offers personal comprehensive evaluation of each client's requirements, innovative design solutions within space, time, and cost constraints, and continuous creative involvement at all stages of systems implementation.

We specialize in prepurchase specifications, project management, and energy use analysis, with high-integrity documentation throughout.

It has been our privilege to be engaged as consultants on a repetitive basis by a significant number of the most reputable architectural firms in New England.

STANDARD
FORM (SF)

254

Architect-Engineer
and Related Services
Questionnaire

1. Firm Name / Business Address:

McCarron, Hufnagle & Bent Inc.
132 Lincoln Street
Boston, MA 02111

1a. Submittal is for ☒ Parent Company ☐ Branch or Subsidiary Office

2. Year Present Firm Established: 1959

3. Date Prepared: 11/7/88

4. Specify type of ownership *and* check below, if applicable

Corporation

☒ A. Small Business
☐ B. Small Disadvantaged Business
☐ C. Woman-owned Business

5. Name of Parent Company, if any:

5a. Former Parent Company Name(s), if any, and Year(s) Established:

6. Names of not more than Two Principals to Contact: Title / Telephone

1) John J. Hufnagle, Jr., President - 617-426-4082
2) Charles H. Bent, Treasurer - 617-426-4082

7. Present Offices: City / State / Telephone / No. Personnel Each Office

Boston, Massachusetts - 617-426-4082 - Personnel - 10

7a. Total Personnel 10

8. Personnel by Discipline: *(List each person only once, by primary function.)*

2 Administrative
__ Architects
__ Chemical Engineers
__ Civil Engineers
1 Construction Inspectors
3 Draftsmen
__ Ecologists
__ Economists
4 Electrical Engineers
__ Estimators
__ Geologists
__ Hydrologists
__ Interior Designers
__ Landscape Architects
__ Mechanical Engineers
__ Mining Engineers
__ Oceanographers
__ Planners: Urban/Regional
__ Sanitary Engineers
__ Soils Engineers
__ Specification Writers
__ Structural Engineers
__ Surveyors
__ Transportation Engineers

9. Summary of Professional Services Fees Received: (Insert index number)

Last 5 Years (most recent year first)

	19 87	19 86	19 85	19 84	19 83
Direct Federal contract work, including overseas	1	1	1	1	1
All other domestic work	4	4	4	4	4
All other foreign work*					

*Firms interested in foreign work, but without such experience, check here: ☐.

Ranges of Professional Services Fees

INDEX	
1.	Less than $100,000
2.	$100,000 to $250,000
3.	$250,000 to $500,000
4.	$500,000 to $1 million
5.	$1 million to $2 million
6.	$2 million to $5 million
7.	$5 million to $10 million
8.	$10 million or greater

Experience Profile Code Numbers for use with questions 10 and 11

001 Acoustics; Noise Abatement
002 Aerial Photogrammetry
003 Agricultural Development; Grain Storage; Farm Mechanization
004 Air Pollution Control
005 Airports; Navaids; Airport Lighting; Aircraft Fueling
006 Airports; Terminals & Hangars; Freight Handling
007 Arctic Facilities
008 Auditoriums & Theatres
009 Automation; Controls; Instrumentation
010 Barracks; Dormitories
011 Bridges
012 Cemeteries *(Planning & Relocation)*
013 Chemical Processing & Storage
014 Churches; Chapels
015 Codes; Standards; Ordinances
016 Cold Storage; Refrigeration; Fast Freeze
017 Commercial Buildings *(low rise)*; Shopping Centers
018 Communications Systems; TV; Microwave
019 Computer Facilities; Computer Service
020 Conservation and Resource Management
021 Construction Management
022 Corrosion Control; Cathodic Protection; Electrolysis
023 Cost Estimating
024 Dams *(Concrete; Arch)*
025 Dams *(Earth; Rock)*; Dikes; Levees
026 Desalinization *(Process & Facilities)*
027 Dining Halls; Clubs; Restaurants
028 Ecological & Archeological Investigations
029 Educational Facilities; Classrooms
030 Electronics
031 Elevators; Escalators; People-Movers
032 Energy Conservation; New Energy Sources
033 Environmental Impact Studies, Assessments or Statements
034 Fallout Shelters; Blast-Resistant Design
035 Field Houses; Gyms; Stadiums
036 Fire Protection
037 Fisheries; Fish Ladders
038 Forestry & Forest Products
039 Garages; Vehicle Maintenance Facilities; Parking Decks
040 Gas Systems *(Propane; Natural, Etc.)*
041 Graphic Design
042 Harbors; Jetties; Piers; Ship Terminal Facilities
043 Heating; Ventilating; Air Conditioning
044 Health Systems Planning
045 Highrise; Air-Rights-Type Buildings
046 Highways; Streets; Airfield Paving; Parking Lots
047 Historical Preservation
048 Hospital & Medical Facilities
049 Hotels; Models
050 Housing *(Residential, Multi-Family; Apartments; Condominiums)*
051 Hydraulics & Pneumatics
052 Industrial Buildings; Manufacturing Plants
053 Industrial Processes; Quality Control
054 Industrial Waste Treatment
055 Interior Design; Space Planning
056 Irrigation; Drainage
057 Judicial and Courtroom Facilities
058 Laboratories; Medical Research Facilities
059 Landscape Architecture
060 Libraries; Museums; Galleries
061 Lighting *(Interiors; Display; Theatre, Etc.)*
062 Lighting *(Exteriors; Streets; Memorials; Athletic Fields, Etc.)*
063 Materials Handling Systems; Conveyors; Sorters
064 Metallurgy
065 Microclimatology; Tropical Engineering
066 Military Design Standards
067 Mining & Mineralogy
068 Missile Facilities *(Silos; Fuels; Transport)*
069 Modular Systems Design; Pre-Fabricated Structures or Components
070 Naval Architecture; Off-Shore Platforms
071 Nuclear Facilities; Nuclear Shielding
072 Office Buildings; Industrial Parks
073 Oceanographic Engineering
074 Ordnance; Munitions; Special Weapons
075 Petroleum Exploration; Refining
076 Petroleum and Fuel *(Storage and Distribution)*
077 Pipelines *(Cross-Country—Liquid & Gas)*
078 Planning *(Community, Regional, Areawide and State)*
079 Planning *(Site, Installation, and Project)*
080 Plumbing & Piping Design
081 Pneumatic Structures; Air-Support Buildings
082 Postal Facilities
083 Power Generation, Transmission, Distribution
084 Prisons & Correctional Facilities
085 Product, Machine & Equipment Design
086 Radar; Sonar; Radio & Radar Telescopes
087 Railroad; Rapid Transit
088 Recreation Facilities *(Parks, Marinas, Etc.)*
089 Rehabilitation *(Buildings; Structures; Facilities)*
090 Resource Recovery; Recycling
091 Radio Frequency Systems & Shieldings
092 Rivers; Canals; Waterways; Flood Control
093 Safety Engineering; Accident Studies; OSHA Studies
094 Security Systems; Intruder & Smoke Detection
095 Seismic Designs & Studies
096 Sewage Collection, Treatment and Disposal
097 Soils & Geologic Studies; Foundations
098 Solar Energy Utilization
099 Solid Wastes; Incineration; Land Fill
100 Special Environments; Clean Rooms, Etc.
101 Structural Design; Special Structures
102 Surveying; Platting; Mapping; Flood Plain Studies
103 Swimming Pools
104 Storm Water Handling & Facilities
105 Telephone Systems *(Rural; Mobile; Intercom, Etc.)*
106 Testing & Inspection Services
107 Traffic & Transportation Engineering
108 Towers *(Self-Supporting & Guyed Systems)*
109 Tunnels & Subways
110 Urban Renewals; Community Development
111 Utilities *(Gas & Steam)*
112 Value Analysis; Life-Cycle Costing
113 Warehouses & Depots
114 Water Resources; Hydrology; Ground Water
115 Water Supply, Treatment and Distribution
116 Wind Tunnels; Research/Testing Facilities Design
117 Zoning; Land Use Studies
201 Telephone Exchanges
202 Master Planning
203 Investigations/Reports
204 Nursing Care Centers
205 ____

10. Profile of Firm's Project Experience, Last 5 Years

Profile Code	Number of Projects	Total Gross Fees (in thousands)	Profile Code	Number of Projects	Total Gross Fees (in thousands)	Profile Code	Number of Projects	Total Gross Fees (in thousands)
1) 006	3	60	11) 048	2	450	21) 082	2	85
2) 008	2	70	12) 049	1	10	22) 083	6	90
3) 010	2	10	13) 050	3	100	23) 084	2	50
4) 014	5	50	14) 052	2	50	24) 089	10	100
5) 017	5	10	15) 055	15	100	25) 094	2	20
6) 019	22	1,800	16) 057	1	25	26) 201	20	140
7) 027	6	18	17) 058	12	90	27) 202	2	60
8) 029	3	60	18) 060	2	50	28) 203	5	70
9) 035	1	15	19) 061	1	10	29) 204	2	20
10) 039	2	30	20) 072	4	120	30)		

11. Project Examples, Last 5 Years

Profile Code	"P", "C", "JV", or "IE"	Project Name and Location	Owner Name and Address	Cost of Work (in thousands)	Completion Date (Actual or Estimated)
006	C	1 Terminal BuildingsAlteration Logan Airport Boston, MA	Mass Port Authority Boston, MA	Electrical 300	88
006	C	2 Majestic Theater Boston, MA	Majestic Theater Boston, MA	500	88
010	C	3 Dormitory Gordon College	Gordon College Wenham, MA	350	84
014	C	4 Immaculate Conception Church Revere, MA	Immaculate Conception Church Revere, MA	120	88
017	C	5 Tenant Fit-up Various Retail Stores in MA and NH	Various Owners	200	87
019	C	6 Data Processing Center Montpelier, VT	National Life Insurance Co. Montpelier, VT	6,300	88
027	C	7 Burger King Restaurants Various Locations	Erin Foods Inc. Manchester, NH	160	86

029	C	Science Building Worcester, MA	Holy Cross College Worcester, MA	250	85
035	C	9 Field House Durham, NH	University of New Hampshire Durham, NH	140	88
039	C	10 Parking Structure Montpelier, VT	National Life Insurance Co. Montpelier, VT	400	86
048	C	11 Inpatient Building Boston, MA	Children's Hospital Boston, MA	7,000	87
049	C	12 Bar Harbor Inn Bar Harbor, ME	Bar Harbor Inn Bar Harbor, ME	175	87
050	C	13 Coral Island Condominiums Bermuda	St. James Management Ltd Boston, MA	1,200	87
052	C	14 Chip Board Mfr. Nashua, NH	Multiwire Nashua, NH	400	83
055	C	15 Various Office Building & Computer Facilities Tenant Fit-Up, 10K to 150K Sq. Ft., MA & NH	Flatley Company Developers Braintree, MA	800	88
057	C	16 Essex County Court House Lowell, MA	Commonwealth of Massachusetts	500	88
058	C	17 Research Laboratories Boston, MA	Tufts Medical Center Boston, MA	150	87
060	C	18 Fogg Art Museum Cambridge, MA	Harvard University Cambridge, MA	900	85
061	C	19 Newburyport Theater Newburyport, MA	City of Newburyport, MA	225	88

072	C	20 Stoughton Technology Center Stoughton, MA	Conroy/Heafitz Co. Boston, MA	1,500	88
082	C	21 USPS Gen Mail Facility North Reading, MA	U.S. Postal Service Waltham, MA	2,000	88
083	P	22 Stationary and Portable Generators/Lowell, MA	Wang Computer Lowell, MA	1,000	85
084	C	23 North Central Correct. Inst. Gardner, MA	Commonwealth of Massachusetts	400	83
089	C	24 Office Building Bala-Cynword, Penn.	Liberty Mutual Ins. Co. Boston, MA	300	87
094	C	25 JFK Office Building Boston, MA	GSA-Boston, MA	350	82
201	C	26 Various Exchange Buildings and Computer Facilities MA, NH	New England Telephone Boston, MA	500	88
202	C	27 Master Plan New Campus Lawrence, MA	Emerson College Boston, MA	50 Fee	87
203	C	28 Naval Medical Clinic Study Portsmouth, NH	Department of the Navy	11 Fee	85
204	C	29 Greenview Nursing Center Wakefield, MA	Greenview Nursing Center Wakefield, MA	200	88
		30			

12. The foregoing is a statement of facts

Signature: Charles H. Bent

Typed Name and Title: Charles H. Bent
Principal In-Charge

Date: 11/7/88

McCARRON, HUFNAGLE & BENT
CONSULTING ENGINEERS INC.
132 LINCOLN ST. BOSTON, MASSACHUSETTS 02111 (617) 426 4082

JOHN J. HUFNAGLE JR. P.E.
CHARLES H. BENT P.E.

PROJECT ENGINEER - PRINCIPAL

CHARLES H. BENT, P.E. - ELECTRICAL ENGINEER

Education:
Coyne Technical Institute
Northeastern University 1962 Assoc. Electrical Engineering

Registered Professional Engineer:
Massachusetts

Professional Organizations:
National Society of Professional Engineers
Illuminating Engineering Society

Experience:

Thirty years electrical facility and building engineering. Project Engineer for electrical design of colleges, laboratories, computer facilities, office buildings, fire stations, transportation facilities, industrial plants, and commercial buildings. Experience includes extensive design in lighting design, energy management and computer power.

Highly qualified because of previous experience working with people and developing design and solutions to design problems.

Project Commitment:

Principal and Project Manager - would attend all design meetings, conferences, and reviews from the first information meeting to the last punch list review during the construction phase.

DESIGN ENGINEER

STEPHEN M. TULEJA - ELECTRICAL ENGINEER

Education:
Northeastern University 1985 B.S. Electrical Engineering Technology

Has taken the National Engineer in Training Examination required for registration.

Professional Organizations:
Illuminating Engineering Society

Experience:
Two years experience in design and engineering in lighting, power distribution, and electronic control.

Design Engineer; design of computer facilities, utility buildings, and office buildings.

Project Commitment:
Attend in-house design meetings, design drawings and keep informed of project development, assist with electrical design and engineering.

KEY PERSONNEL

JOSEPH C. McCARRON, P.E., *Consultant*

EDUCATION:
1942 Boston College,
B.S., B.A.
Registered Professional
Engineer in
Massachusetts

EXPERIENCE:
Thirty-three years in building electrical construction and design.
Five years in the field as electrical foreman for construction firms.
Twenty-eight years with McCarron, Hufnagle & Bent, Inc. Responsible for preparation of contract documents for hospitals, healthcare facilities, commercial office buildings, educational and institutional structures.

PROFESSIONAL ORGANIZATIONS:
NSPE, MSPE, ACEC, MCA

JOHN J. HUFNAGLE, JR., P.E., *Principal,*
Chief Electrical Engineer

EDUCATION:
Lowell Technical
Institute 1951
Mech-Electrical
Engineering
Northeastern University
Assoc. 1956 Electrical
Engineering
Registered Professional Engineer in Massachusetts, Rhode Island, Maine, Vermont, Indiana, New Hampshire, Georgia, California, and South Carolina.

EXPERIENCE:
Thirty-five years in building engineering.
Responsible for preparing electrical plans and specifications for office buildings, computer facilities, airport terminals, schools, industrial buildings, laboratory buildings, colleges, and hospitals.
Design experience in high-security areas such as prisons, subway stations, garages, data processing centers and airport terminals, including extensive experience in electric distribution, lighting, communications, controls, alarms, system evaluation, reports and analysis.

PROFESSIONAL ORGANIZATIONS:
IEEE, IES, PES, NSPE, NFPA, CSI

CHARLES H. BENT, P.E., *Principal,*
Electrical Engineer

EDUCATION:
Coyne Technical
Institute,
Northeastern University
Assoc. 1962 Electrical
Engineering.
Registered Professional
Engineer in Massachusetts

EXPERIENCE:
Thirty years in design and building engineering.
Project engineer for electrical design of office buildings, hospitals, subway stations, airport terminals, schools, industrial buildings and colleges. Extensive experience in lighting, data processing, power distribution, alarm systems, controls, energy conservation analyses and U.P.S. systems.

PROFESSIONAL ORGANIZATIONS:
Society of Professional Engineers
Illuminating Engineering Society.

WILLIAM AMOROSO, Electrical Design
Engineer

EDUCATION:
Northeastern University
1974 BS Electrical
Engineering
Engineer in Training for
Registration

EXPERIENCE:
Ten years experience in design and engineering in hospitals, data centers, and office buildings.
Project engineer specializing in lighting, power distribution, electronic control, in-house computer operations.

PROFESSIONAL ORGANIZATIONS:
Institute of Electrical and Electronic Engineers.

McCARRON, HUFNAGLE & BENT
CONSULTING ENGINEERS INC.
132 LINCOLN ST BOSTON, MASSACHUSETTS 02111 · (617) 426-4082
MHB
JOHN J HUFNAGLE JR P.E.
CHARLES H BENT P.E.

SIMILAR PROJECTS DESIGNED BY MCCARRON, HUFNAGLE & BENT INC.

LOGAN INTERNATIONAL AIRPORT
- Terminals
- Two-level Roadway
- Parking Structure

MASS BAY TRANSPORTATION AUTHORITY
- New Orange Line Stony Brook Station
- Station Modifications:
    - Auditorium
    - Washington Street
    - Haymarket

SITE LIGHTING
- College and Universities
- Research and Office Parks
- Public Facilities
- Hospitals

EMERSON COLLEGE MASTER PLAN
- Electric Distribution
- Data Transmission
- Television Transmission
- Communiction Network
- Audio-Visual

OFFICE BUILDINGS

McCarron, Hufnagle & Bent, Inc. brings a great depth of experience to its electrical design of commercial office buildings.

Office building projects designed by MHB address electrical design concepts such as energy-efficient lighting with modular or natural lighting systems, low-voltage switching, and energy management.

We offer a full range of electrical design and consulting services to meet the unique requirements of each project, with continuous creative involvement from conceptualization to startup.

At MHB, we are committed to providing commercial office facilities that incorporate latest technological approaches to significant design issues. We are concerned with energy use and the quality of work environments as well as with innovative design solutions within space, cost, and time constraints.

CLIENTS INCLUDE:

Liberty Mutual Ins. Co.
Boston, MA
Gainesville, GA
Mishawaka, IN
Natick, MA
Neshannock, PA
Portsmouth, NH
Williamsport, PA

Berkshire Life Insurance Co
Pittsfield, MA

George R. White Fund Bldg.
Boston, MA

John Hancock Mutual Life
Boston, MA

John Hancock Mutual Life
Boston, MA

Massachusetts Teachers Assoc.
Boston, MA

New England Telephone Co.
Salem, MA

Ocean Spray Cranberries
Plymouth, MA

Texaco Company
Brookline, MA

Wheelabrator-Frye, Inc.
Corporate Headquarters
Hampton, NH

McCarron, Hufnagle
& Bent, Inc.
Electrical Consulting Engineers
132 Lincoln St. • Boston • Massachusetts 02111
(617) 426-4082

HOSPITALS

McCarron, Hufnagle & Bent, Inc. brings an exceptional depth of experience to its electrical design of hospitals, laboratories, and medical research facilities.

Health care facilities designed by MHB comprise both new construction and new systems installation in existing facilities. We are thoroughly conversant with the complex demands of current specialized hospital systems, including those for intensive care units, radiology and CAT scan labs, animal care and research facilities, and food service areas.

We offer a full range of electrical design and consulting services to meet the unique requirements of each project, with continuous creative involvement from conceptualization to startup.

At MHB, we are committed to providing health care facilities that incorporate latest technological approaches to significant design issues. We are concerned with energy use, safety, and the quality of work environments as well as with innovative design solutions within cost, time, and space constraints.

CLIENTS INCLUDE:

Cardinal Cushing General Hosp.
Brockton, MA

Children's Hospital
Boston, MA

Beth Israel Hospital
Brookline, MA

Bon Secours Hospital
Methuen, MA

Carney Hospital
Dorchester, MA

Elliot Hospital
Manchester, NH

Kennedy Memorial Hospital
Brighton, MA

Goodall Hospital
Stanford, ME

Liberty Mutual Insurance
Rehabilitation Center
Boston MA

Notre Dame Hospital
Manchester, NH

Optical Physics Lab
Hanscom Field Plasma
Physics Lab
Bedford, MA

Danvers State Hospital
Danvers, MA

Westboro Geriatrics Building
Westboro, MA

St. Elizabeth's Hospital
Brighton, MA

McCarron, Hufnagle & Bent, Inc.
Electrical Consulting Engineers
132 Lincoln St. • Boston • Massachusetts 02111
(617) 426-4082

COMPUTER FACILITIES AND DATA CENTERS

McCarron, Hufnagle & Bent, Inc. brings a great depth of experience to its electrical design of computer room and communications facilities.

Computer center projects designed include both new construction and new systems installation in existing facilities; in addition, we provide retrofitting of existing systems for energy conservation.

We offer a full range of electrical design, documentation, and consulting services to meet the unique requirements of each project, with continuous creative involvement from conceptualization to startup.

At MHB, we are committed to providing computer room facilities that incorporate latest technological approaches to significant design issues. We are concerned with energy use and the quality of work environments as well as with innovative design solutions within space, cost, and time constraints. We specialize in prepurchase bidding and construction management, with the experience to fast-track a job effectively.

CLIENTS INCLUDE:

Liberty Mutual Ins. Co.
Computer Centers
Burlington, MA
Boston, MA
Lewiston, ME
Portsmouth, NH

Carney Hospital
Data Processing Center
Dorchester, MA

Commonwealth of Massachusetts,
Department of Revenue
Boston, MA

John Hancock Mutual
Life Insurance Company
Boston, MA

New England Telephone
Company
MA, NH, and RI (56 Locations)

National Life Insurance
Company
Montpelier, VT

Public Welfare Computer Center
Boston, MA

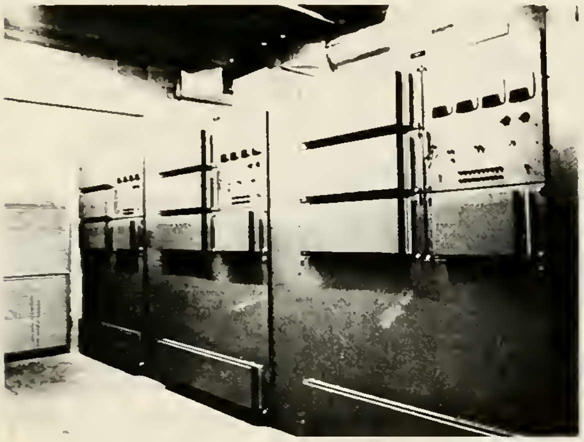
Wakefield Municipal Light
Company
Wakefield, MA

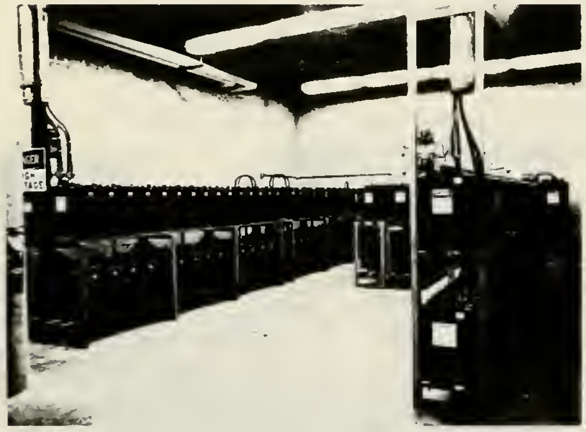
Zayre Corporation
Natick, MA

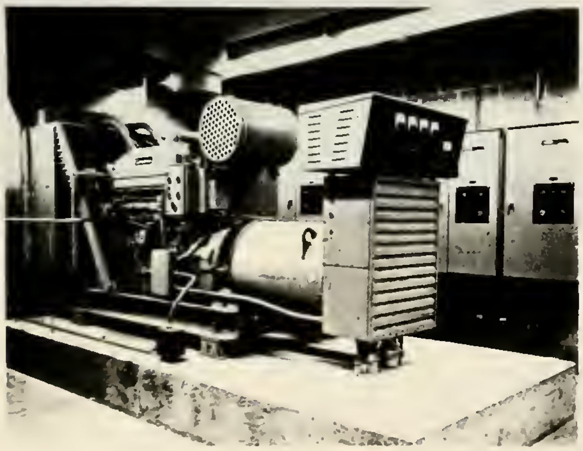
Middlesex County
Court House
Cambridge, MA

McCarron, Hufnagle & Bent, Inc.
Electrical Consulting Engineers
132 Lincoln St. • Boston • Massachusetts 02111
(617) 426-4082

UNINTERRUPTIBLE POWER SUPPLY (UPS) Systems







McCarron, Hufnagle & Bent, Inc. brings a great depth of experience to its electrical design of computer facility uninterruptible power supply (UPS) and standby emergency power systems.

Projects involving design and installation of UPS modules and parallel generator systems by MHB involves close coordination with supporting air conditioning equipment and energy management systems design, fuel storage analysis, and operations regulation.

We offer a full range of electrical design, documentation, and consulting services to meet the unique requirements of each project, with continuous creative involvement from conceptualization to startup.

At MHB, we are committed to providing computer facility UPS systems that incorporate latest technological approaches to significant design issues. We are concerned with energy efficiency and system reliability as well as with innovative design solutions within space, cost, and time constraints. We specialize in prepurchase bidding and construction management, with the experience to fast-track a job effectively.

CLIENTS INCLUDE:

Liberty Mutual Ins. Co.
Data Processing Center
Portsmouth, NH

Liberty Mutual Ins. Co.
Disaster Recovery Center
Lewiston, ME

Fidelity Management Research
Boston, MA

Elliot Hospital
Manchester, NH

New England Telephone
Corporate Data Centers
Manchester, NH
Burlington, MA

Zayre Corporation
Natick, MA

LAURENCE L. RUBIN, Architect

Laurence L. Rubin
Architect
381 Congress Street
Boston, MA 02210
(617) 542-6243

LAURENCE L. RUBIN

Professional Experience

Laurence L. Rubin is principal of the firm Laurence L. Rubin, Architect which was founded in 1963. During the past twenty-five years he has been responsible for the design, construction documents and site supervision of numerous projects. These include new buildings, additions, alterations and restorations to existing buildings for residential, bank, retail, office and research and development uses. In addition, since 1979 he has been architectural consultant to Carol R. Johnson and Associates, Inc. for a number of projects including Barnyard Farm, Worcester, MA; Water Pavilion at Lechmere Canal and Park, Cambridge, MA; Pavilion at Bird Island Flats, Boston, MA; and Laughing Brook Education Center, Hampden, MA.

Prior to starting his office in 1963, Mr. Rubin had been employed by Perley F. Gilbert Associates, Lowell, MA; Perry, Shaw, Hepburn and Dean, Boston, MA; and Campbell, Aldrich and Nulty, Boston, MA as project designer and architect for a number of school and public use buildings.

For approximately a year before establishing his office, Mr. Rubin was an employee of the Boston Redevelopment Authority working in the Charlestown Urban Renewal Area where his activities included providing architectural services to homeowners rehabilitating their property in Charlestown. He was also the architect for the restoration of several 18th and early 19th century buildings in the Thompson Square section of Charlestown. In 1984, Mr. Rubin was the architect for the adaptive re-use of the one hundred year old Leonard School in Malden, MA for professional office use.

Education

Massachusetts Institute of Technology, Bachelor in Architecture, 1952.

Professional Registration

Registered Architect in the Commonwealth of Massachusetts.

Memberships

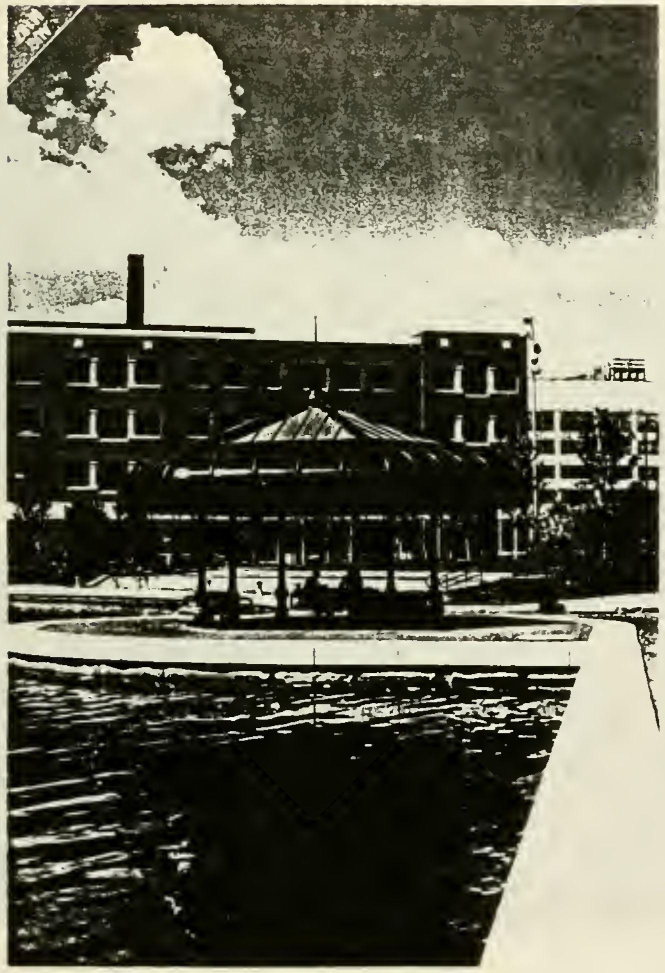
Boston Architectural Center.
National Trust for Historic Preservation.

Laurence L. Rubin
Architect
381 Congress Street
Boston, MA 02210
(617) 542-6243

List of Projects

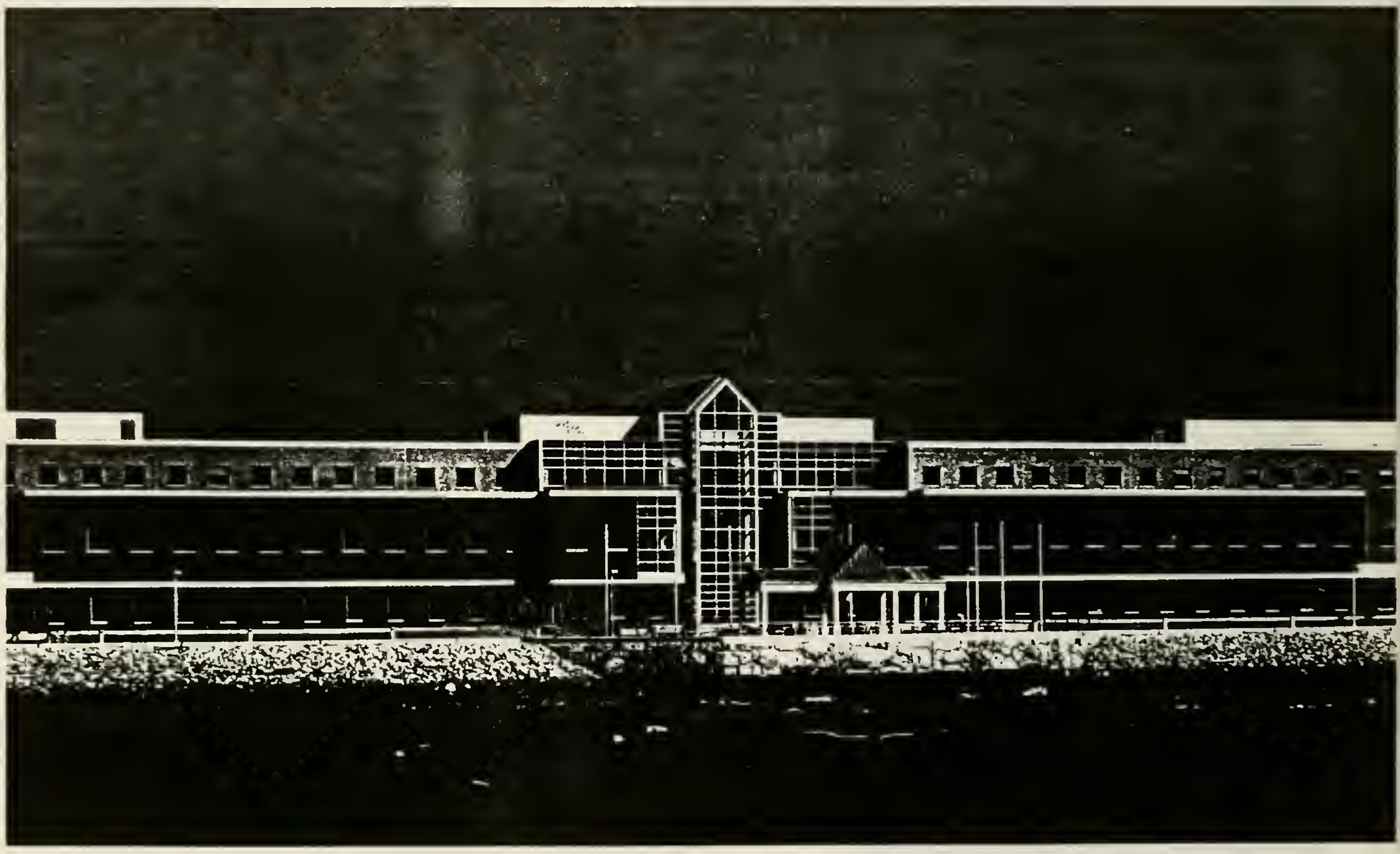
Pavilion, Bird Island Flats, Boston, MA (with Carol R. Johnson & Assoc.)
Pavilion, Lechmere Canal and Park, Cambridge, MA (with Carol R. Johnson & Assoc.)
Laughing Brook Education Center, Hampden, MA (with Carol R. Johnson & Assoc.)
Barnyard Farm, Worcester, MA (with Carol R. Johnson & Assoc.)
Leonard Professional Office Building for Barry M. Manuel, M.D., Malden, MA
Building for SPI-Trust, Bedford, MA
Building for Lexington at Middlesex Realty Trust, Billerica, MA
Addition and Alterations to Ahavath Torah Synagogue, Stoughton, MA
Retail Stores for Sunnyhurst Rlty Ltd Partnership, Stoneham, MA
Building for Griffith Realty Trust, Bedford, MA
R & D Building for CSPI, Billerica, MA
Office and Warehouse Building for A. W. Mayer, Billerica, MA
Professional Office Building for Sunnyhurst Realty Ltd Partnership, Stoneham, MA
Alterations for Wolfers Showroom, Alston, MA
Alterations to Building for Plymouth Rock Trans, Co., Stoneham, MA
Retail Store for Sunnycrest, Inc., Stoneham, MA
Bank Building for Century Bank and Trust Company, Somerville, MA
" " " " " " " " , Malden, MA
" " " " " " " " , Cambridge, MA
" " " " " " " " , Lynn, MA
" " " " " " " " , Salem, MA
Restoration, Benjamin Thompson House, Charlestown, MA
" , Timothy Thompson House, Charlestown, MA
Addition and Alterations, Warren Tavern, Charlestown, MA
Office Building for Conviser Realty Trust, Brookline, MA
Temple Aliyah, Neddham, MA
Office Building for Myron Sherman, Medford, MA
Addition and Alterations to Building for Otis Hospital, Cambridge, MA
Medical Office Building for George Street Realty Trust, Stoneham, MA
Office Building for S and M Realty Trust, Somerville, MA
Building for United Distributors, Burlington, MA
Retail Store, Newburyport, MA
Addition and Alterations to Central Hospital, Somerville, MA
Retail Store, Needham, MA
Renovation to Building for Fabric Store, Woburn, MA
Renovation to Office Building, 111 State Street, Boston, MA
Book Store, Boylston Street, Boston, MA
Retail Stores for Galer Realty, Westland Avenue, Boston, MA
Renovation to Building, 180 Needham Street, Newton, MA
Addition to Pfaelzer Residence, Dedham, MA
Goldman Residence, Gloucester, MA
Mann Residence, N. Dartmouth, MA
Rawl Residence, Norfolk, MA

Laurence L. Rubin
Architect
381 Congress Street
Boston, MA 02210
(617) 542-6243



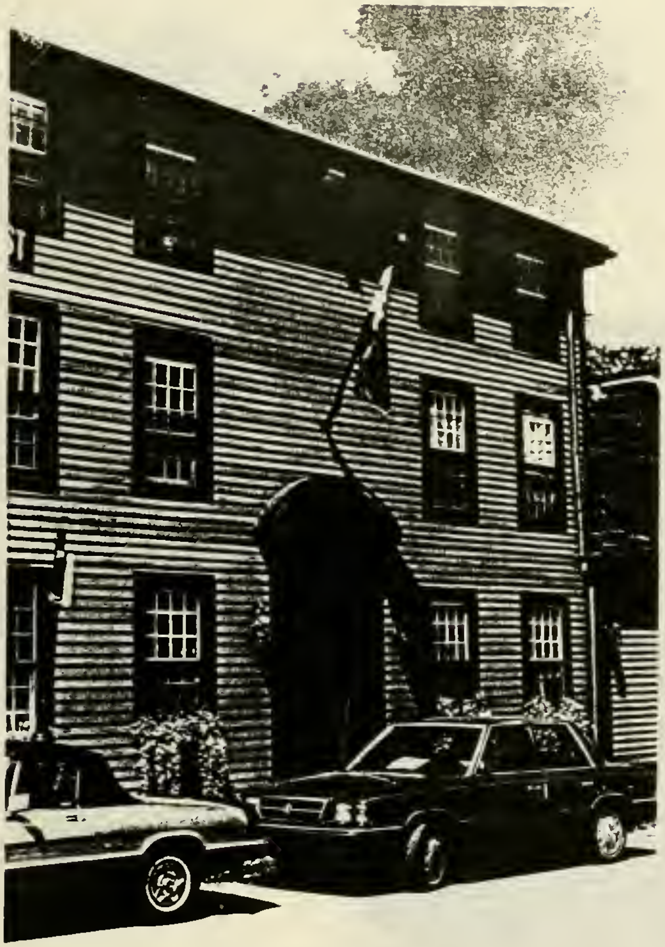
Water Pavilion, Lechmere Canal and Park, Cambridge, MA 1982
(with Carol R. Johnson & Associates, Inc.)

Laurence L. Rubin
Architect
381 Congress Street
Boston, MA 02210
(617) 542-6243



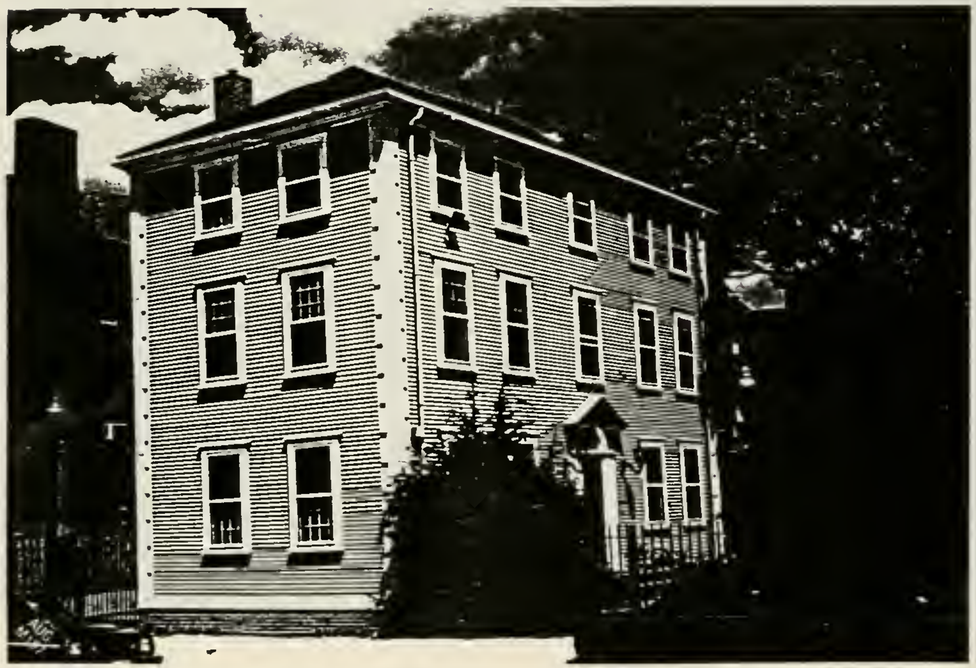
Pavilion (in front of office building), Bird Island Flats, Boston, MA 1984
(with Carol R. Johnson & Associates, Inc.)

Laurence L. Rubin
Architect
381 Congress Street
Boston, MA 02210
(617) 542-6243



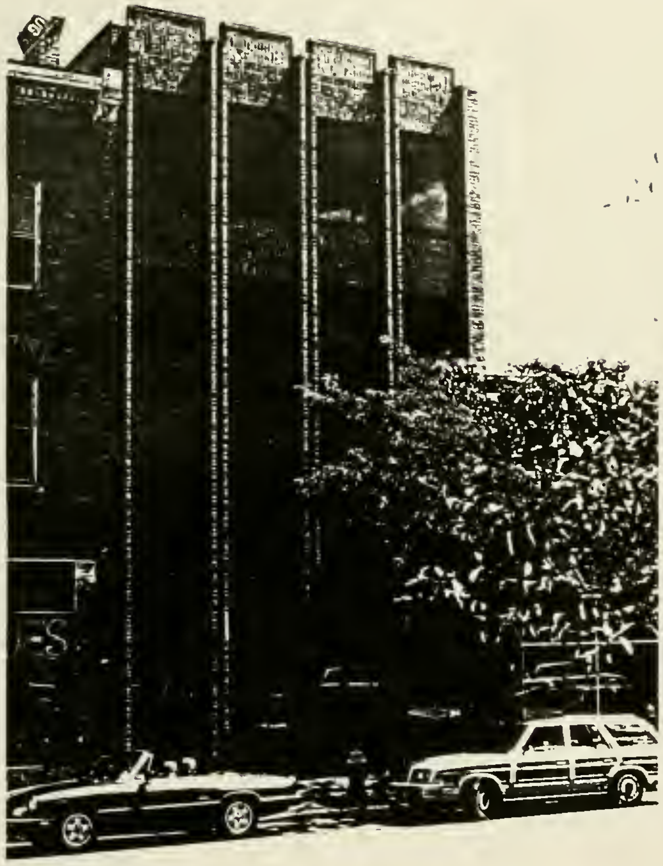
Warren Tavern, Main Street, Charlestown, MA 1970

Laurence L. Rubin
Architect
381 Congress Street
Boston, MA 02210
(617) 542-6243



Benjamin Thompson, House, Main Street, Charlestown, MA 1970 (restored)

Laurence L. Rubin
Architect
381 Congress Street
Boston, MA 02210
(617) 542-6243



Office Building, Harvard Street, Brookline, MA 1969

5941 19

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